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SURVEY AND EXCAVATIONS  
IN SOUTHERN ECUADOR

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# SURVEY AND EXCAVATIONS IN SOUTHERN ECUADOR

BY

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## PREFACE

This report presents the results of field work carried out in Ecuador during the fall and winter of 1941. The authors spent three months in the southern highland making a brief survey of the general region and excavating in the Province of Cañar.

The expedition was one of ten archaeological projects in Central and South America sent out by the Institute of Andean Research under the sponsorship of the Coordinator of Inter-American Affairs. The Institute financed the field work and largely financed the cost of publishing this report. We are particularly indebted to Dr. George C. Vaillant, Chairman of the Executive Committee of the Institute, and to Dr. Fay-Cooper Cole, of the University of Chicago, who was Director of the Ecuador project.

We wish to express our gratitude to Colonel Clifford C. Gregg, Director of Field Museum, through whose co-operation and interest it was made possible for the senior author to be absent from the Museum in order to participate in the expedition, and who made available to us the facilities of the Museum while we were organizing the expedition, and during the time that this report was in preparation. Field Museum also contributed to the cost of publishing the report.

During our stay in Ecuador we made many friends and received hospitality and assistance from numerous individuals. Foremost among these was Sr. Aníbal Buitrón Chaves, who spent three months with the expedition. Sr. Buitrón was an ever-cheerful companion, and undertook enthusiastically and efficiently the tasks of survey work and excavation. To him should go a share of the credit for the results that were achieved. We shall remember with warm pleasure the days passed with him in the field.

Without the good will and assistance which we received from officials of the Ecuadorean government, our work would have been impossible. To Dr. Julio Tobar Donoso, Minister of Foreign Affairs, Dr. Abelardo Montalvo, Minister of Education, and Dr. A. Aguilar Vasquez, Minister of Interior, we wish especially to acknowledge our indebtedness for issuing letters of recommendation to public officials in the area where we travelled, and for facilitating our work in other ways.

We were cordially received and materially assisted by the National Academy of History in Quito. This organization took a

lively interest in our plans and problems, and through its good offices we made essential contacts with government officials and with other persons who were helpful to us. The Academy further assisted us by appointing a commission to inspect the archaeological material which we recovered. Through the recommendation of this commission, and of the Academy, we received the necessary official permits to bring the material to the United States for study. We wish to thank the following officials of the Academy: Dr. Julio Tobar Donoso, Director; Cristobal de Gangotena y Jijón, Sub-Director; J. Roberto Páez, Secretary; Senator Isaac Barrera, Editor of the Boletín; and Dr. José Gabriel Navarro. We are especially grateful to Sr. Carlos Vivanco, Chief of the Boundary Archives and Pro-Secretary of the Academy, for many kindnesses.

Dr. J. Jijón y Caamaño, the leading archaeologist of Ecuador, graciously gave us access to his magnificent archaeological collection in Quito, and permitted us to photograph specimens from southern Ecuador. He was very helpful while we were becoming oriented, and made useful suggestions concerning the material we collected in the field.

United States Ambassador Boaz Long took a personal interest in our work and helped us in innumerable ways. For his friendship and assistance we are most grateful. He enthusiastically supported the plan to have an Ecuadorean participate in our field work, and he gave us material help in arranging for Sr. Buitrón to accompany us. We wish also to thank Messrs. Gerald Drew, Harry Reed, Sam Olden, Jr., and Alexander Hurd, all of the Embassy staff, for technical assistance, encouragement, and friendship.

We wish to acknowledge our indebtedness to Mr. and Mrs. Edwin N. Ferdon, Jr. Since 1939 Mr. Ferdon has been conducting an archaeological survey in Ecuador for the School of American Research and the University of Southern California, under the auspices of the National Academy of History in Quito. To the Ferdons we are grateful for many kindnesses, and for advice and invaluable assistance while in Ecuador and after our return to the United States.

While in the field, we received hospitality and assistance from many individuals. Sr. Bolívar Guevara and his brother, Alonso, were our hosts at Hacienda Zula, and generously gave us every facility. We carried away with us from Zula happy memories of our visit. Sr. Carlos Arias Eguiguren gave us valuable information about Loja, and arranged for us to stay at his three haciendas,

Carapali, Seucer, and Sumay Pamba, in the Canton of Saraguro. Sr. Carlos Burneo, National Deputy for Loja, made available to us the facilities of Hacienda Uduzhí in Saraguro.

We are greatly indebted to Sr. Leandro Torres, of Cuenca, and his son, Alfonso, for permission to excavate at Cerro Narrío and Shillu, and to Sra. Esther Palacios de Martínez and her mother for allowing us to work at Cashaloma. Sr. Ezequiel Clavijo, of Cañar, was helpful to us on our first visit to Cañar, and later in selecting undisturbed areas for excavation at Cerro Narrío. Special thanks are due our *obreros* at Cañar, who worked faithfully and took turns guarding the excavations at night.

For permission to study and photograph their archaeological collections we are grateful to the following persons: Sr. J. Jijón y Caamaño, of Quito; Padre Eugenio Goetz and Sr. Angel Alberto Gallegos, of Riobamba; the Mother Superior of the Convento San Francisco de Sales, Alausí; the Rector of the Colegio Benigno Malo (Arriaga Collection), Sr. Joaquín Cordoba (Cordero Collection), and Padre Miguel Durán, all in Cuenca; Sr. José Pío Eguiguren (Lequerica Collection), Loja; and Sr. Max Konanz, Guayaquil.

Ing. Jacobo Vorbeck presented interesting specimens to the expedition. Sr. Carlos Zevallos Menéndez, Director of the Museum at the Colegio Vicente Rocafuerte in Guayaquil, gave us help in becoming oriented in Ecuador. We wish to mention also the warm hospitality and friendship of Misses Anne B. Cacioppo and Bertha Marsch in Quito.

The following persons also were generous in giving us help and information: Dr. Víctor Gabriel Garcés, Quito; Sr. Alfredo Chaves, Quito; Mr. Juan L. Gorrel, Quito; Sr. Pablo Hanibal Vela, Director del Departamento de Turismo, Quito; Dr. W. C. McIntyre, Baños; Sr. Miguel Wagner, Guayaquil; Sr. Arturo Montesinos Malo and Dr. Tomás Vega Toral, Cuenca; the Rector of the Colegio Bernardo Valdivieso, Loja; Mr. John McClung, Loja; and Mr. Maurice Stacey, San Lucas.

In the preparation of this report we have received the help of numerous individuals. We are especially grateful to Dr. Paul S. Martin, Chief Curator of the Department of Anthropology in Field Museum, for wise advice and constant encouragement. We wish also to thank the following members of the Museum staff: Dr. Sharat K. Roy, Curator of Geology, for identification of minerals and for the preparation and examination of micro-sections of pottery; Dr. Fritz Haas, Curator of Lower Invertebrates, for identification

of shells; Mr. George Quimby, Assistant Curator of American Archaeology, for help in pottery analysis; Mr. John Pletinckx, for ceramic restoration; Mr. Robert Yule, Assistant in Archaeology, for his careful execution of maps and plans; and Mr. John Janecek, Staff Illustrator, for making drawing and charts. We are indebted to Mrs. Iva Osanai Schmitt and Mr. Leonard Johnson for aid in sorting and classifying pottery. Finally, we are grateful to Miss Lillian Ross, Associate Editor of Scientific Publications, for seeing the report through the press.

*September 2, 1942*

DONALD COLLIER  
JOHN V. MURRA

## INTRODUCTION

Our original intention in going to Ecuador had been to conduct a survey in the extreme southern highland to determine the relation of earlier archaeological material to the known late Inca horizon, and to discover what tie-ups there were, if any, with northern Peru. Upon our arrival in Quito in September, 1941, this plan had to be modified because of the conflict between Peru and Ecuador, which made work in southernmost Ecuador impossible.

After further reading in the literature, we decided to work in the southern highland, even though we could not penetrate as far south as originally planned. The central and northern highlands were already known from the extensive work of Sr. Jijón (1914, 1920a, 1927) and others. The central coast was known from the work of Saville (1907, 1910). For the past two years Edwin N. Ferdon, Jr., had been carrying out an extensive survey in the coastal region, as well as excavations on Santa Elena peninsula (1940b, 1941a). Verneau and Rivet (1912, 1922) had illustrated pottery vessels from the southern highland. Uhle had done some preliminary work in the region, and both he (1922c, 1928b, 1931) and Jijón (1930) had published interpretative discussions of the area, although systematic descriptive data were few. The southern coast was and is archaeologically unknown, but the military situation there eliminated that area as a place to work.

It was therefore decided to make a reconnaissance in the southern part of the Province of Chimborazo, and in the provinces of Cañar, Azuay, and Loja, with the hope of finding one or more sites that would yield stratigraphic data.

Uhle reported finding in the southern highland a clear Inca horizon, as well as two other cultures, one of which he called "Mayoid" and traced directly from Central America, and the other which he believed to have been derived from the "Mayoid" culture. He related this early "Mayoid" culture to Proto-Nazca in Peru.

The month of September was spent in Quito for orientation and in order to secure the necessary government permits. Very helpful contacts were made with members of the National Academy of History and with other persons interested in Ecuadorean archaeology. Arrangements were made with Sr. Bolívar Guevara to visit his hacienda in southern Chimborazo, and with Sr. Carlos Arias to visit his haciendas in the Canton of Saraguro in Loja.



It was our intention to take with us into the field a young Ecuadorean to gain experience in archaeology. Through the efforts of Dr. Jaime Barrera of Quito we met Sr. Aníbal Buitrón Chaves, a young Quito school teacher with a keen interest in the prehistory and present-day Indian population of his country. As a result of the interest of Dr. Abelardo Montalvo, Minister of Education, Sr. Buitrón was given a leave of absence from his teaching duties, and he spent three months with us in the field.

The month of October was spent in the Province of Chimborazo. For ten days we were the guests of Sr. Guevara and his brothers at Hacienda Zula, on the high *paramo* on the upper Chambo drainage in southern Chimborazo. Here we carried out a surface survey and made test excavations in several places.

From Zula we returned to Riobamba, where we made brief trips along the Chambo River and to Punín, and studied and photographed the collections of Padre Goetz, at the Colegio San Felipe, and of Sr. Alberto Gallegos. The former collection contained pottery from Zula, as well as from the general vicinity of Riobamba, and the latter consisted of pottery from Hacienda Maguaso on the middle Chambo.

From Riobamba we went to Alausí in order to study a collection at the Convento San Francisco de Sales. This collection was of special interest because it contained sherds which tied up with finds made later in Cañar to the south.

From Alausí we proceeded by train to Tambo, and thence by automobile to Cuenca. The month of November was spent in a rapid survey in the provinces of Azuay, Cañar, and Loja, and in the study of three important collections in Cuenca, namely, the Arriaga Collection at the Colegio Benigno Malo, the collection of Padre Miguel Durán, and the Cordero Collection. The most important site visited from Cuenca was Cerro Narrío near Cañar, one of Uhle's "Mayoid" sites. The trip from Cuenca to Loja was made by plane. While in Loja we inspected the Lequerica Collection, and visited one local site and two sites in the Catamayo Valley to the west of Loja. From Loja we proceeded by muleback northward, and in the Canton of Saraguro we visited four sites. These were Carapali, Chilpas near Hacienda Seucer, Guando, which we reached from Hacienda Uduzhí, and Sumay Pamba on the Rio Jubones. The last site was of special interest because it tied up with Cerro Narrío.

Upon our return to Cuenca, we had reached the conclusion that the most favorable place to carry out excavations was in the Cañar



Valley, because of the variety of ceramic types found there and because there was good promise of encountering stratified deposits at Cerro Narrío. Accordingly, we established headquarters at Cañar, and during December we excavated at Cerro Narrío and at two other sites in the valley.

Although Cerro Narrío had been gutted by treasure hunters and was literally covered with pits and craters, we were able to find small undisturbed areas on various parts of the site. Stratigraphic excavation in deposits two to three meters in depth revealed a clear transition from early to late ceramic types, with intrusive influences from the north in late times. The cross-checking of the Narrío sequence with the ceramics from Shillu and Cashaloma, two shallow, late sites in the same valley, confirmed the coming in of northern wares in late times, and added the final Inca horizon.

Upon completion of the work in Cañar, the excavated material was sent to Quito, where it was washed and packed for shipment to the United States. The material is deposited at Field Museum of Natural History in Chicago.

The period of three months spent in southern Ecuador was too brief to accomplish more than a preliminary attack on the area. Our reconnaissance, in particular, barely scratched the surface, and it was weakest in the Province of Azuay, where there are remains definitely related to those of the Cañar Valley. The principal contribution of our work has been the establishing of a stratigraphic sequence for the Cañar Valley, and the placing in this sequence of certain intrusive wares from the Puruhá region and elsewhere to the north.

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## I. THE SURVEY

One of the first problems facing the survey was the gap between the Puruhá area, north of Riobamba, which had been investigated and reported on by Sr. Jijón y Caamaño, and the southern provinces for which "Mayoid" cultures had been reported by Uhle. At the time of the survey, only one small collection from this area was known in the literature (Uhle, 1931, pp. 32-36) but the published data were promising.

### SOUTHERN CHIMBORAZO

#### ZULA

Before our departure from Quito, Sr. Bolívar Guevara invited us to visit his property lying in the southeast corner of the Province of Chimborazo, at the headwaters of the Chambo River. Some archaeological remains had been excavated in the past in this area, and several structures, allegedly of Incaic origin, had been reported. From the point of view of our interests the ranch was ideally located, and we went there early in October.

The Zula ranch house lies in a valley at an elevation of 3,650 meters on the *paramo*, southeast of Palmira and due east of Alausí. The rest of the ranch lies between 3,800 and 4,000 meters, high on a windswept, grassy plateau just north of the great Nudo del Azuay, the natural wall connecting the two cordilleras and separating Chimborazo from southern Ecuador.

Near Palmira we saw the "queen's steps" (Proaño, 1918g) which seemed to be nothing but agricultural terraces. Certainly their size prevented them from being steps for anybody but a race of giants in forty-league boots.

In the Zula area we were told of six *churos*, allegedly Inca *tambos* or resting stations for messengers or the armed forces. Their name, which in Quechua means "snail," comes from their alleged spiral character. We visited two of these structures: Churo de Llullin and Churo de Chuqui Pucara. The following other *churos* were listed for the area: Pomamarca, Chiniguayco, Potrero, and Rey Llilla. The last is supposed to be the largest. The *churos* are usually placed on high points dominating the neighboring countryside and have stone-faced terraces built concentrically. There is no spiral ramp of any kind connected with them. The walls are made of irregular rocks piled up without any mortar. At Llullin (Fig. 1),

about 3 km. northeast of Zula, the topmost platform carries a small circular stone structure about 2 meters high, with a small rectangular chamber north of it. At the eastern end of the basic platform there is a large rectangular stone structure.

At Llullin several pits were sunk on the different platforms, in the central circular structure and in the eastern chamber, with disappointing results. The few sherds found were coarse and non-

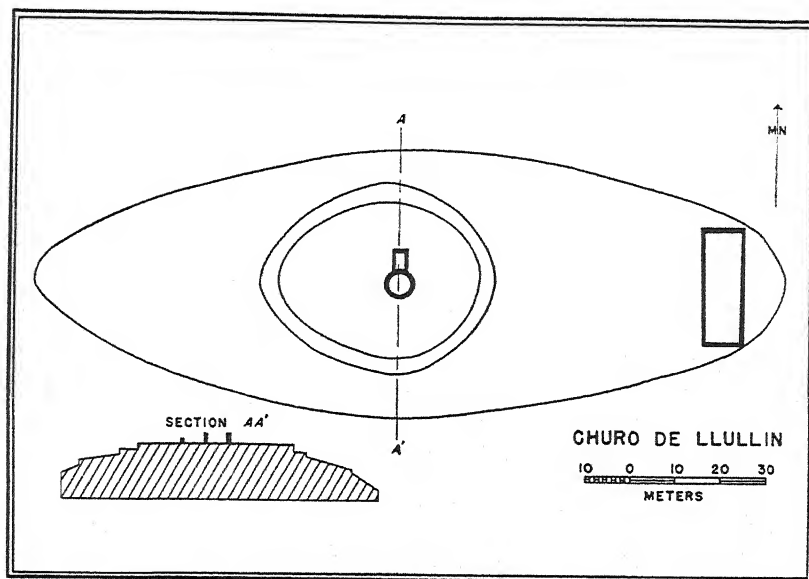


FIG. 1. Ground plan and section of Churo de Llullin, Zula.

descript, and did not help in identifying the builders of these structures. These *churos* differ from *tambos* and other structures of the Incas described by Verneau and Rivet (1912, pp. 76-78) for the area, in size, configuration, and absence of worked stone. Who their builders were is as yet not clear, although the Incas probably did not do the job.

We were also unable to identify the builders of numerous corrals spread through the countryside. They are multicameral structures with floors somewhat below ground level. The stone walls are about 2 meters thick and from 1 to 2 meters high. At Challan, on a ridge above Zula, a test trench 1 by 2 meters was sunk in the corner of one of these enclosures, which was 24 by 16 meters (Fig. 2). The soil was very hard, with a few nondescript sherds, and hardpan was reached at 63 cm. The walls, which were 2 meters thick and about

2 meters high, were carelessly constructed of large, undressed boulders. The floor appeared to have been sunk below the base of the wall. There is no indication as to the possible use of these structures. There were more than twenty on this ridge alone.

Several other spots in the area were examined, and several trenches eventually sunk on a flat ridge to the east of Challan (called by us Z6). A trench 3 meters long and 1.5 meters wide was sunk into the brown soil, and a profusion of sherds was recovered. Apparently this place was an interment ground, as nine burials were opened within a very limited space. We were not able to locate the village site to which this burial ground belonged.

From the ceramic evidence, the people of Z6 were a pre-Incaic group clearly related to Puruhá groups farther north (Jijón, 1927). Though it may be possible, and quite likely, that they were the builders of the *churos* and corrals discussed above, no concrete evidence was uncovered to support such a hypothesis. In any case, they appear to have been a fairly late group, practicing agriculture, using the llama, and possessing a knowledge of metallurgy.

The most prevalent ceramic type in burials at Z6 is the globular jar with one lug (Pl. 1, Figs. 1, 2, and 4). In one instance there are two lugs, both on the same side of the vessel. Some of the jars are unslipped and unpolished, while others show red slip and are somewhat smoothed and polished. In a few cases there is a negative black design between shoulder and rim, with white painted lines delimiting the field (Pl. 1, Fig. 4).

A red-slipped, polished compotera<sup>1</sup> also was found in a burial. The supporting foot is perforated in three places (Pl. 1, Fig. 5).

A small jar with flaring rim is slipped white all over the outside. Just inside the rim is a band of red, and there may have been some red dots on the outside also.

Several bowl forms are present in the sherd material. One of them is polished inside and out, except for an area on the outside of the bottom. There is some dark red slip on the inside of the vessels. Other bowls are plain and unslipped.

Some of the rims also suggest larger jars with flaring rims, of coarser pottery. They are heavily grit-tempered, and are less well finished than the forms described above. Some notched rims, ears, and lugs on and below the rim, and an occasional handle complete

<sup>1</sup> The compotera ("fruit bowl") is a footed bowl found frequently in Ecuador, Colombia, and Panama.

the picture of Z6 ceramic forms. In the case of one of the larger vessels, a band of crudely incised chevrons, reminiscent of Puruhá designs, is found on the upper shoulder.

Various members of the family owning the land have excavated at one time or another on their property, and their finds have been dispersed among collectors. Father Eugenio Goetz of Riobamba, who owns an interesting collection, has received several Zula pieces

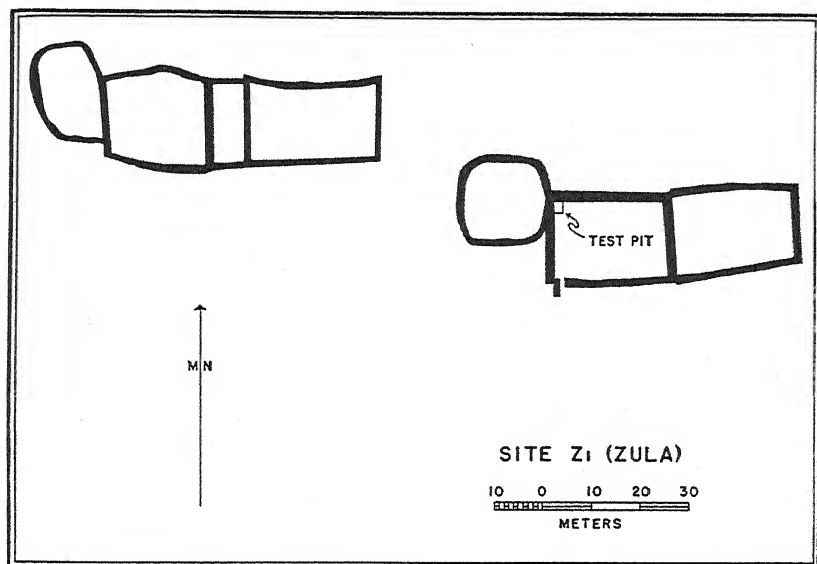


FIG. 2. Ground plan of corrals at Zula.

which expand our knowledge of Upper Chambo ceramics and reinforce their bonds to the north. Thus a vessel with anthropomorphic neck and two double ears or handles (Pl. 2, Fig. 4) is clearly Puruhá, although it lacks the negative design so characteristic of Elen Pata (Jijón, 1927, vol. 1, pls. 53-71).

Other Zula types found in the collection include a polished red cantimplora<sup>1</sup> with white bands on the neck (Pl. 2, Fig. 1), several jars and cantimploras with negative designs on the body (Pl. 2, Figs. 3 and 6), and several bowls, round or shaped like a truncated cone, with "drinking tube" (Pl. 2, Figs. 2, 5, and 7). All have their parallels in the Puruhá area (Jijón, 1927, vol. 1, pl. 109).

<sup>1</sup> The cantimplora ("canteen") is a jar with tall neck and is flattened from front to back, suggesting an army canteen. The term is applied to this form of vessel throughout the Andes.



The forms in this collection are not the product of stratigraphic excavation, and may have come from several levels. The parallels with Puruhá crosscut the periods established for that area by Sr. Jijón and are simpler and cruder than the prototypes. Only additional excavation will clear up the exact relationship, but it appears that Puruhá people drifted up onto the *paramo*, leaving some of the fancier trimmings farther north.

We recovered few artifacts from the Zula area. A large stone metate (Pl. 1, Fig. 3), a well-worn and sturdy object, points to the agricultural occupations of the people. Today barley and potatoes are grown at this altitude, but not maize. Although numerous llama bones were found in the débris, we did not encounter any bone tools. This lack could probably be overcome through excavation in house sites. A slim, fairly well-worked copper *topu* was found in Burial 9 at Z6.

#### MAGUASO

Following the Chambo River north, there is a site south of Pungalá on the Maguaso hacienda belonging to Sr. Angel Alberto Gallegos. It is quite probable that the site was a stratified one, but it was not scientifically excavated. The collection is now in Riobamba where we had the opportunity to examine it. Pungalá is listed as being within the main area of Puruhá occupancy (Jijón, 1927, vol. 1, p. 2). The ceramics seem to fit the general Chimborazo-Puruhá pattern, but there are several new forms and decorations.

The following types were noted in the Gallegos Collection. Incised jars are numerous and are incised on the body. Triangles and chevrons are the main decorative elements (Pl. 3, Figs. 1, 2, and 4).

There are eight bowls placed on low tripods (Pl. 3, Fig. 6). Most of these have lugs below the rim and triple incised lines along the body. The inside of one bowl is divided into quadrants filled with incised hatchings and concentric diamonds (Pl. 3, Fig. 3).

The compotera, that ubiquitous Chimborazo form, is also present. The supporting foot is sometimes perforated. Most of the vessels are shallow and undecorated. In one case a negative design, 4 cm. wide, is found on the rim of the bowl. The inside is painted red along the rim and has a red circular spot in the center. The tie-up with Tuncahuán compoteras from farther north is unmistakable.

A very unusual compotera is illustrated in Plate 4, Figure 5. The foot is white, slipped, and hollow. The bottom, between foot



and shoulder, has a black slip, while from there to the rim the vessel is slipped white again. On this white slip black chevrons and diagonal lines have been painted, some of them with an orange outline.

Another vessel, a double tripod with *hoja de cabuya*<sup>1</sup> legs, has a similar red band on the inside of the bowls, and a red spot in the center of each. The two bowls are connected through a hole in their joint wall. The arc connecting them is not functional (Pl. 3, Fig. 5).

A red-slipped tripod jar with four double, incised welts is a more unusual piece (Pl. 3, Fig. 7). The bottoms of the feet are incised, to imitate toes. This ornamentation shows affiliation with Huavalac pottery, in the Puruhá region, as does a black jar (Pl. 3, Fig. 4).

Another ware, represented by two bowls and a tall jar with flaring rim, has pink or reddish slip with geometric white painted designs (Pl. 4, Figs. 1, 2, and 4).

A jar unusual in both shape and decoration is illustrated in Plate 4, Figure 3. The whole body is covered with a whitish slip. There are several black parallel negative lines around the neck. The area between the lines is painted red. On the body there are several double and single scrolls outlined in negative painting with the whitish dots shining through. The scrolls are then painted red. It looks like an exuberant Tuncahuán form.

#### ALAUSSI

The one collection from the area which was mentioned in the literature came from Alausí (Uhle, 1931, pp. 32 ff.), a town in southern Chimborazo, on the Quito-Guayaquil railroad. Here the Salesian Mothers had assembled in their convent<sup>2</sup> a small museum containing numerous pieces from the coast of Ecuador and also some from the Alausí area. Most of these local wares came from one pit and were quite different from archaeological materials to the north as well as from those of Zula, located due east from Alausí. Their known affiliations are clearly to the south, in the Cañar Valley, though even there they are distinctly intrusive.<sup>3</sup>

<sup>1</sup> "Leaf of century plant" (agave), a name suggested by Sr. Jijón (1927, vol. 2, p. 149).

<sup>2</sup> San Francisco de Sales.

<sup>3</sup> These unusual wares at Alausí were found on the property of Sra. Cristina Ricaurte.

Rs 3/

These ceramic forms are characterized by very good, thin pottery, slipped and polished on the outside and ornamented with engraved designs from rim to shoulder. According to Uhle (1931, p. 33, footnote 1) the best pieces of this type were taken to Quito and lost in the fire which seriously damaged the Universidad Central there in 1929. Incidentally, a manuscript dealing with these wares was also lost.<sup>1</sup>

The fragments still available are not numerous and fall into the following categories:

*Glossy Black Engraved* is a type of varying thickness, having numerous rows of punctates (Pl. 5, Figs. 1-4). Punctate zones are separated by engraved lines from polished zones which may be plain or engraved with single or double circles. The grooves created through engraving are filled with limonite. The shapes seem to run to straight-walled jars.

*Black Engraved* is less polished and designs are created through alteration of hatched and plain polished fields (Pl. 5, Figs. 5-7). Rhomboids, triangles, and step-designs are frequent.

*Gray Engraved*, with the exception of the paste color, is similar to Black Engraved (Pl. 5, Fig. 9).

*Brown Engraved* is probably a variety of Black Engraved (Pl. 5, Fig. 10). The shoulder of a jar with flaring rim is decorated with engraved triangles, the alternating areas being hatched.

*Glossy Red Engraved* is a buff ware with red slip on the outside surface, and is characterized by the absence of punctate zones. While the shapes are similar to Black Engraved, the lines here are really linear punctates, which are also filled with limonite. Straight lines, cross-designs, hatched rhomboids, and occasionally curved lines are the ornamental motifs (Pl. 6, Figs. 1-5, and 8). The ware is highly polished. A variety of this ware, while polished all over, is slipped only in certain delimited areas. Thus, in Plate 6, Figures 6 and 7, the inside of the step-design and the group of concentric circles are red, while the rest is the natural color of the clay. This suggests that the engraving took place after the vessel was sun-dried, but before it was painted and fired.

A very thin variety of Gray Engraved is represented by only two sherds, with engraved groups of three concentric circles (Pl. 6, Figs. 9-10).

<sup>1</sup> Communication from Uhle to Sr. Vicente Merchan, editor of the *Alausi* weekly newspaper.

A few fragments of globular jars with carelessly engraved zones on a red-slipped body are also found (Pl. 5, Figs. 11-13). They differ in thickness, shape, and surface treatment from other engraved wares and have no parallels elsewhere.

The collection at Alausí also contains an interesting ware with bands delimited by incised lines. Alternate areas are painted red and polished. Owing to the fragmentary nature of these vessels it is hard to make out the designs employed. A T-form band is frequent, with additional sharp-angled bands (Pl. 6, Figs. 11-12, and 15). This ware is much thicker than any others in the collection. It is found farther south and also at Macas, in the Oriente. We have applied to this ware the name Red Banded Incised.

Large vessels, of cruder pottery, with tall upright walls and bottoms studded on the inside with bits of quartz are also found (Pl. 6, Figs. 13-14). Each studded row is separated by an incised line. Presumably these were yuca (manioc) graters, and similar vessels have been found to the south and west.

Finally, a few sherds of Narrío Red-on-Buff (see detailed discussion in Chapter II) are also found (Pl. 5, Figs. 14-17).

Besides the unusual wares described above, the Alausí area has produced ceramic evidence that ties it up with the rest of the Province of Chimborazo and its aboriginal inhabitants, the Puruhá. Thus, Sr. Merchan has in his possession a globular jar with one lug, with white painted designs all around the rim. This jar strikingly resembles the negative painted vessel from Zula (Pl. 1, Fig. 4). Also a small compotera, well smoothed, with negative design on body and rim, and red overpaint, seems to tie up very well with similar Tuncahuán vessels discovered in the heart of the Puruhá country.

The Salesian Mothers have also witnessed excavations at Gualuntos, where apparently Incaic-influenced vessels were recovered. Their similarity with Puruhá-Incaic vessels from farther north is close (Jijón, 1927, vol. II, pl. 134). The same burial yielded a triple red bowl with communicating sections, with white painted designs (Pl. 5, Fig. 8).

Other pieces in the convent's museum confirm the tie-up with Zula, already suggested by Sr. Merchan's vessels. They come from all over the Alausí area and are the usual globular jars and compoteras. One undecorated cantimplora and a small, well-smoothed truncated conical vessel from Gonzol complete the collection.

## AZUAY-CAÑAR REGION

R3 3/

Cuenca is the largest city in southern Ecuador and the natural urban center for the area. After finishing our work at Alausí, we went to Cuenca to examine its collections and determine our future line of activity.

Southern Ecuador was occupied in pre-Incaic times by the Cañari people and was conquered by the Incas during the reign of Tupac Yupanqui in the middle of the fifteenth century. The influence of the Incas can be clearly seen in this region, where they built Tomebamba, a large imperial center, near whose site modern Cuenca is located. They also built Inga-pirca, a fortress near Cañar, and many other smaller places. These structures have been studied and described in various publications (see Uhle, 1923c; also Jijón, 1929; Arriaga, 1922; Vega Toral, 1920, 1928, 1929; Matovelle, n.d., and 1921).

On the other hand, the pre-Incaic peoples in the area, the Cañari in Azuay and Cañar and the Paltas in Loja, are much less known, particularly in so far as identification of archaeological remains with ethnographic data is concerned. The Cañari language is insufficiently known; it became extinct some time during the seventeenth century and only a limited vocabulary based mostly on place names and patronymics has been worked out (Cordero Palacios, 1924; Jijón, 1919b, pp. 375-380; Verneau and Rivet, 1912, pp. 29-36). Several affiliations of this language have been suggested. Arriaga felt that the Cañari had Carib affiliations (Arriaga, 1922, pp. 79-95), but his evidence is insufficient. Uhle had thought at an earlier time that there was a close relationship between Cañari and Mochica, spoken on the north coast of Peru (Jijón, 1927, vol. 2, p. 201). At a later date (Uhle, 1931, p. 11) he felt that the Cañari spoke a Chorotegan language, which is not so great a contradiction, as he felt that the Chimu civilization of the North Coast and the "Mayoid" cultures of Cañar were both of direct Central American descent. Sr. Jijón (Jijón, 1927, vol. 2, pp. 201 ff.) has proposed a grouping of several southern Ecuadorean and north Peruvian languages into a Puruhá-Mochica family, of which Cañari would be a member, although it is admitted that Puruhá and Cañari were apparently mutually unintelligible. The whole matter requires additional investigation, which Sr. Jijón has undertaken and which may be forthcoming in his latest work, of which only the first volume, dealing with the northern part of the country, is now available (Jijón, 1941).



Whatever the linguistic affiliations, there was no archaeological complex available which could be definitely labeled as Cañari. Antiquities from this area had been discussed and photographically reproduced, but it was clear that the authors were dealing with several complexes which had not been separated through stratigraphic excavation (González Suárez, 1878, 1892; Verneau and Rivet, 1912, 1922; Arriaga, 1922). It can be presumed that at least the later horizons within the area, particularly those showing strong Incaic influences, are representative of the Cañari people. These late horizons vary considerably within the area here under consideration.

Preoccupied with the relation of the "Mayoid" cultures reported for the area by Uhle (Uhle, 1922c) to the expected Cañari remains, as well as with their alleged Central American origins, we undertook a study of the local collections.

The largest ceramic group in the area is housed in the local colegio. It was collected by Sr. Ezequiel Clavijo in the Province of Cañar and sold by him to the school, which has decided to use it as the nucleus for a museum, named after the late Jesús Arriaga. Most of the materials in this collection are from Cerro Narrío, although Inga-pirca and several other sites in the Cañar region are also represented. There was no doubt of the Inca horizon in this area, as many ceramic specimens have an indubitable Cuzco cast. It was hard to distinguish clearly among the numerous other forms, and a trip to Cerro Narrío seemed indicated.

The abundance of surface sherds found by us at Cerro Narrío, their obvious relation to the "Mayoid" wares described by Uhle, and the apparent existence of stratified remains there, induced us to return eventually to this place for an intensive excavation.

In Cuenca we also visited the collections of the late Luis Cordero and of Padre Miguel T. Durán. Most of the material in these collections came from east and southeast of Cuenca in the Chordeleg, Sigsig, and Quinjeo areas. Several attempts to deepen our understanding of these forms through a visit to Chordeleg were frustrated because the bridges were washed out. The problem of why late horizons in the Cañar area are so different from similarly late horizons in the eastern Azuay area is as yet unsolved. Both areas were presumably inhabited by the Cañari people before the coming of the Incas and both have an early "Mayoid" horizon. The careful survey of eastern Azuay is most important for future archaeological work in southern Ecuador.

A detailed description and discussion of Cañar ceramics and artifacts will be found in Chapters II, III, and IV.

At present, there are no archaeological data based on systematic excavation for the Province of Azuay. Azuay pottery, as known from the above collections and from the abundant illustrations in Verneau and Rivet (1922), seems to contain numerous anthropomorphic forms usually represented by human faces engraved or modeled on necks of jars. Three different treatments of the human face can be distinguished.

- A. The eyes are an incised circle with a central punctate. The nose is modeled with lateral punctates for nostrils. The mouth is usually an incised line. In some instances the eyes and mouth are engraved rather than incised. The ears are small and modeled, with a punctate. These vessels are slipped red and some have no other decoration on the body (Pl. 8, Figs. 1-4); others are engraved all over the body with a characteristic step-and-zigzag design (Pl. 9, Figs. 1-4, and 6).
- B. The second type is characterized by modeled, coffee-bean eyes, long, prominent nose with punctate nostrils, large, modeled ears, and a modeled ridge outlining the lower face. The body may be slipped but otherwise plain (Pl. 9, Fig. 5), or it may be decorated with engravings (Pl. 9, Figs. 7-9). This type is found through much the same area as type A, as well as in late horizons at Cerro Narrío.
- C. The two vessels of the third group came from the region of Azogues and Chordeleg and are slipped a deep red, both inside and out. The eye is a modeled ellipsoid, surrounded by a modeled ridge. The nose is modeled, with flaring nostrils. Eyebrows are also modeled. Ears are in low relief, while the mouth is made of two semi-lunar ridges with prominent, pendent, lower lip. One of the vessels has handles and one has a series of modeled loops above the maximum diameter (Pl. 10, Figs. 1-3; cf. also Verneau and Rivet, 1922, pl. 46, fig. 1). There are two similar vessels in the Lequerica Collection in Loja, but their provenience is not known.

There are other forms reported for the area, but they are not very numerous and the sample is not large enough to allow classification. A very interesting vessel (Pl. 10, Fig. 4) in the Durán Collection is reported to have come from the Descanso area between Azogues and Cuenca. It is of coastal Chavin type and is supposed to have been washed out of a bank by the rains. A diligent search



by our group on the hills from which the find was reported failed to reveal any sherds of similar type. The fragments found there showed definite Incaic decorations and were usually of a coarse, utilitarian ware.

Also of interest is a double communicating jar with overall negative painting on the outside (Pl. 10, Fig. 5). Such negative polka dots are suggestive of early ceramics in the Province of Chimborazo.

Gold objects have frequently been found in the area, sometimes in amazing quantities. Detailed description and discussion can be found in Uhle (1922b), González Suárez (1878), Saville (1924), and Heuzey (1870).

Uhle (1922b, p. 112) has made an attempt to classify the cultures of the area and has published a chronology for them. He finds a Maya period, a Tiahuanaco-influenced era, two post-Tiahuanaco periods and the Incaic wave. His descriptions are very limited and unsatisfactory. No proof of any kind is brought in support of his views. Durán (1938a) follows Uhle in this classification.

Obviously only stratigraphic excavation will clarify the relations existing between the different Azuay cultures. Uhle has reported finding what he calls his "Mayoid" culture throughout Cañar, Azuay, and Loja. In our survey we were quite interested in this distribution, and although frequently we were unable to find what we now call the Early Narrío horizon, it was possible to confirm its presence at the confluence of the Rircay and Saraguro rivers in southernmost Azuay. So far as our survey is concerned this is also its southernmost authenticated extension in Ecuador.

At the confluence of the Rircay and Saraguro rivers, at an elevation of about 800 meters, there is a large hacienda called Sumay Pamba, belonging to the Arias family. Numerous remains have repeatedly attracted attention and sites by that name have been described and illustrated by Verneau and Rivet (1912, pp. 106-113) and Uhle (1923c, Maps 8, 9, and 10). By comparing the data discussed by them, one can see that they refer to two different ruins at Sumay Pamba. A third site was located by our party. For purposes of clarification we are presenting a map (Fig. 3) showing the geographic relation between Sumay Pamba A, described by Rivet; B, mapped by Uhle; and C, visited by us.

The first two sites are large stone-walled enclosures which Rivet and Uhle believe to be Incaic. Discussion of a similar site in the Catamayo Valley can be found on page 34.

Sumay Pamba C, examined by us, consists of a buried stone structure and sherd areas on the bluff above the river confluence. The sherds there showed close affinity with Narrío Red-on-Buff wares (Pl. 11, Figs. 1 and 3; cf. Chapter II). There were some Narrío Red-on-Buff Fine sherds, and some Narrío Gross. Cañar Polished bowls with ring bases were also present. The general impression is one of close similarity to Narrío wares. Intrusive

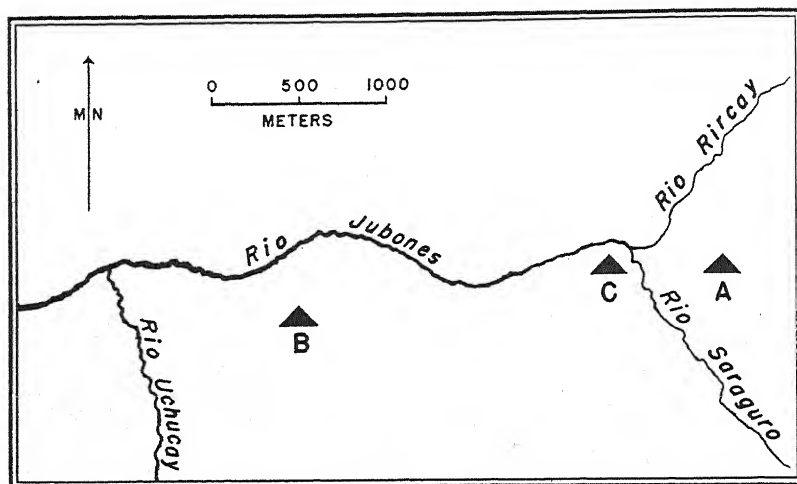


FIG. 3. Map showing archaeological sites at Sumay Pamba.

wares of northern provenience found in late horizons at Cerro Narrío are absent here. There is no evidence of Incaic influence.

Some of the ceramics at this site were different from those farther north. Thus, shallow bowls with rows of large punctates on the outside of the rim, polished red slip and white paint are occasionally found (Pl. 11, Figs. 5-6).

Other bowls are red-slipped and decorated with appliqué quartered bumps (Pl. 11, Fig. 2), while a third type of red-slipped bowl with very straight rim is highly polished.

Some engraved sherds are also found. The outside is gray and polished, with parallel grooves and rows of bullet-shaped punctates (Pl. 11, Fig. 4).

#### LOJA PROVINCE

Beyond the Jubones we continued our survey into Loja Province, which is virtually *terra incognita* archaeologically. Different occupations have been reported, particularly by Uhle, but these

have not been substantiated by evidence. In pre-Incaic times, the Palta Indians, of Jivaro and therefore of presumed Arawak affiliation, occupied the area (Verneau and Rivet, 1912, pp. 36-39, 113-115; Jijón, 1919b, pp. 380-392). Certain ceramics, to be discussed below, have been identified with the Palta occupation. On the whole, however, information of archaeological nature about the group is minimal.

Of the different other occupations postulated for this southernmost Ecuadorean province, the "Mayoid" would be the earliest (Uhle, 1922c). In our survey we found no evidence for this contention, either in the sites we visited in Canton Saraguro or in the Catamayo Valley. A site which Uhle dug near the city of Loja was visited and the original pits were found. Even the laborers used by the German investigator were located. There was no evidence of Red-on-Buff ceramics whatever, and the *peones* could not remember finding anything beyond a figurine, which is probably the one figured by Uhle (1935, fig. 3). The sherds in the area are coarse and nondescript. In a large collection in the city of Loja belonging to the late Father Lequerica, there were three or four tiny sherds which might have been "Mayoid," but the bulk was peculiar to the area. This, of course, does not preclude the possibility of eventual location of these Cañar-Azuay wares in Loja, although we found none.

Proto-Panzaleo II, an early culture of north and central Ecuador, is also represented in Loja, according to Uhle (1927a, p. 111) and Jijón (1930, pp. 141-142, pls. 17, fig. 1; 19, fig. 2). Similarly, the Tuncahuán period, allegedly represented over most of Ecuador, is also found in Loja (Jijón, 1927, vol. 1, p. 91; and 1930, p. 179, fig. 26 [2]). Another occupation postulated for the area is Tiahuanaco. Jijón (1927, vol. 1, p. 134) feels that Loja was the province in Ecuador which showed strongest Tiahuanaco influence, while Uhle claims that figurines of an "Epigonal" character have been found in Loja (Uhle, 1920b, p. 52, note). The evidence for these statements has never been discussed or published. If we accept Tiahuanaco influence in some of the gold objects from Azuay (Means, 1931, pp. 162-167) it is quite probable that it came by way of Loja. Unfortunately, so far nothing concrete has been shown to come from that province that could be definitely labeled Tiahuanaco.

#### CARAPALI

Our survey party visited several sites in the Saraguro area on the properties of Messrs. Arias and Burneo. At several points

called Ayaloma and Llundli, above the Carapali hacienda at an elevation of 2,700 meters, there was abundant evidence of aboriginal occupation. The tops of hills were terraced and the ceramics were of a coarse, undecorated type. Only this utilitarian ware was found. The dominant forms are wide-mouthed jars and compoteras, the feet of which show an occasional touch of red slip. The ware is coarsely tempered and dull orange in color.

#### CHILPAS

The same ware was found in abundance at a ridge called Chilpas (elevation 3,200 meters), midway between Hacienda Seucer and Hacienda San José. There it was sparingly mixed with Incaic forms and the tempering was less coarse than that of the ware found at Carapali. More vessels show evidence of painting, particularly on rims, and one bowl has alternate bands of red and white on the outside. Shallow compoteras with perpendicular walls and a single perforation in the foot are frequent, as are coarse bowls with similarly straight walls. Tripod vessels and wide-mouthed jars with slightly flaring rims, all coarse and poorly smoothed, are also frequent. A multicameral structure with stone walls of Incaic construction is located on top of the ridge.

#### GUANDO

A large site which was probably inhabited by the same people is located at Guando, a high ridge (elevation 3,400 meters) about 15 km. south of Hacienda Uduzhí. Here the northern and southern approaches to a flat ridge top are terraced, and some of the terraces are faced with stone. The terraces are 1.5 to 3 meters high. Ceramic material is very abundant and forms a mound in one spot at the center of the ridge. The sherds are piled up very densely and form a deposit 1.5 meters deep and 5 meters in diameter. Several smaller trash-pits were also found.

The ceramics here follow the pattern found in the area. The ware is utilitarian and crude. Only a few vessels are slipped or polished. Mica temper which could be seen at Chilpas is more frequent here. Shallow and flat-topped compoteras are in evidence. As at Chilpas, the feet of the compoteras have a single perforation just below the bowl (Pl. 11, Fig. 8). Perforated feet are common in central Ecuador, but vessels from that area usually have three windows cut into the clay. Tripod bowls, crude shallow dishes and other utilitarian shapes are frequent. A ring-based bowl and a scalloped rim were peculiar to Guando, as was the evidence of



fabric impression on the inside of bowls (Pl. 11, Fig. 7). This two-strand, plain twined pattern is the only fabric impression reported for Ecuador. The fragments on which it occurs are in no way different from typical Saraguro wares in other respects.

#### CATAMAYO VALLEY

After an unsuccessful search for "Mayoid" sites around the city of Loja, and because of our inability to proceed to the Peruvian border on account of the conflict then going on, we descended into the Catamayo Valley, which is west of Loja.

The Catamayo Valley is much lower (elevation about 750 meters) than the surrounding highlands. It is a dry, hot area, with tropical vegetation near the river and arid wastelands beyond. Its importance lies in the fact that the Catamayo becomes the Chira River which flows southwest and empties into the Pacific well down on the north coast of Peru. Eventual tie-ups with that coast would be of considerable interest.

Trapichillo is located two kilometers west of La Toma. It was an area of dense aboriginal occupation as shown by the numerous remains spread over a large area. The most typical pottery for the area is a coarse utilitarian ware, orange in color, with irregular appliqué rims, some straight and some flaring (Pl. 12, Figs. 1-2). This pottery is barely smoothed, showing no evidence that it was polished or slipped. Bowls, jars with flaring rims, and tripods are present.

A different ware, somewhat coarser than the preceding, uses appliqué bands of clay just below the rim on the exterior of vessels. These bands, 1.3 to 2.2 cm. in width, sometimes parallel the rims; in others they zigzag on the neck. The bands are decorated with double rows of reed punctates (Pl. 12, Figs. 3-5). In one case the appliqué band undulates in wide loops, suggesting a snake. It, too, shows a double punched line (Pl. 12, Fig. 6).

The third common ware is thinner and finer than the others. It is not slipped, is orange in color and well smoothed. The shapes for the most part are bowls, and jars with flaring rims. The outside, below the rim, is decorated with painted lines running vertically or horizontally, and sometimes crisscrossing each other (Pl. 12, Figs. 7-10). Their color varies from purple through maroon almost to black. In a few cases there is a narrow band of purple festoons painted on the inside of the bowl just below the rim.

These wares are also abundantly represented in the Lequerica Collection already mentioned. They are presumably from the

Province of Loja, though not necessarily from Trapichillo. Sr. Jijón y Caamaño has indicated in a private communication that he believes the sherds to be of Palta manufacture.

Another site in the same valley, located six kilometers south of La Toma on the property of Dr. José María Eguiguren, is known as Valle Hermoso. The sherds there were few and nondescriptly utilitarian. A large stone-walled structure, 650 meters long by about 500 meters wide, is also located on the property. It is very similar to structures mentioned in the Jubones Valley (p. 29). The outside wall, paralleling the road, is about one meter high, and the cross walls, which divide the whole enclosure into long, narrow stalls, barely protrude above the surface. Verneau and Rivet (1912, p. 112) suggest that such structures could have been used for warehouses or barracks by the Incas. If they had been used in this way, the walls would be considerably higher, or if they had fallen, the ground would be full of rubble. Such is not the case. Uhle (1923c, p. 12) thinks that they were irrigated fields. Whatever their use, the builders of the enclosures are not certain to have been the Incas. No ceramic evidence of Inca occupation was found. The senior author of this report has seen somewhat similar walled enclosures on the north and central coast of Peru, particularly in the Casma Valley, where they are pre-Inca, though definitely late.

A visit to the oft-mentioned Lequerica Collection was not as fruitful as it might have been, because of the loss of the collector's catalogue. Father Lequerica died a few years ago, after accumulating a large collection from the area. Each item was recorded and catalogued, but unfortunately the heirs misplaced the records. Therefore we were unable to consider a group of vessels of Late Chimú type, because their exact provenience was unknown. Had they been found at Loja, the importance of this collection would have been great.

As mentioned earlier, there were a few sherds in the collection which tied up with the Cañar area. The presence of engraved and polished fragments suggests a late intrusion from the north. We are not sure that these sherds came from Loja.

One interesting sherd is reddish and shows grooving or incising with a wide and rounded tool, besides some punctates. Such "pressed out" decoration is extremely rare at Narrío but appears to be frequent in the north Peruvian highlands.



## II. CERRO NARRIO

### INTRODUCTION

In familiarizing ourselves with the literature on Ecuadorean archaeology there was one site that kept reappearing in both Uhle's and Jijón's writing. Concrete data were few, but the value of the site in theoretical consideration appeared to be great. It was one of the most important "Mayoid" sites in the Cuenca-Cañar region and it was said to be the type site for a later, derived civilization—that of the "clay seats." Here and there hints were dropped about connections with Tuncahuán horizons to the north and Tiahuanaco to the south. Its name, Cerro Narrío, appears in text or footnotes in every article dealing with Ecuadorean prehistory published after 1922. The large collection of Narrío ceramics at the Colegio Benigno Malo in Cuenca convinced us that the significance of the site had not been exaggerated.

Contact was made with Sr. Ezequiel Clavijo of Cañar, who had sold the above collection to the colegio. Sr. Clavijo had been active for the past twenty-five years in the Cañar region, deriving a fair income from his devotion to treasure-hunting.

Cerro Narrío, a steep-sided hill approximately 100 meters high, is 700 meters west of and across the Rio Quillohuac from the town of Cañar, at an elevation of 3,100 meters (Pl. 13, upper; Maps 2 and 3). A desolate place, virtually without any vegetation, it attracted Sr. Clavijo as early as 1914, because of the abundance of potsherds and other evidence of aboriginal occupation. Through the years he dug here and there, occasionally being rewarded for his efforts with a whole pot, a row of beads, or other Indian trinkets, the market for which was always steady in Cuenca.

In January, 1922, this idyllic picture was blasted wide open. A local boy, Pepe Arévalo, found some gold objects while playing on the hill. What happened next is best described by Max Uhle (1922f):

All Cañar is extremely excited by the finds made some time early last week. Digging folk have invaded Narrío hill and their numbers are growing every day. They consider themselves masters of the situation and no provincial force available could dislodge them, if you remember their naturally obdurate character. Saturday there were perhaps two hundred persons working on the hill; yesterday and today there were four hundred or so. An even larger mob hung around curiously watching the proceeding. Five tents have so far been installed. Many people work day and night; the dawn finds them digging, and they live, eat and sleep on the hill. From far or

near, Narrío reminds you of an ant hill with expeditions going forth in all directions to investigate the neighboring area. The road to the hill is full of working ants—food vendors, spectators, and diggers going back with or without loot.

The digging folk are getting nobler; lawyers and society people are forming excavating companies. Recently a new company with ample resources was formed, mostly made up of lawyers, 32 in all, ready to go into action any minute now. Other companies are formed constantly on the hill itself. The whole surface has already been parcelled out and the end of this madness cannot yet be seen.

And here are the facts. Occasionally gold has been found and is still being found. It is rarely solid gold. Most of the time copper shines brilliantly and blinds the masses. It is very doubtful if even two pounds of gold were recovered.<sup>1</sup>

The finds did not improve as time went by, and in 1941 only three men kept the faith and continued digging. Clavijo had meanwhile accumulated a large collection of pottery and other artifacts which he sold in 1940 to the colegio in Cuenca.

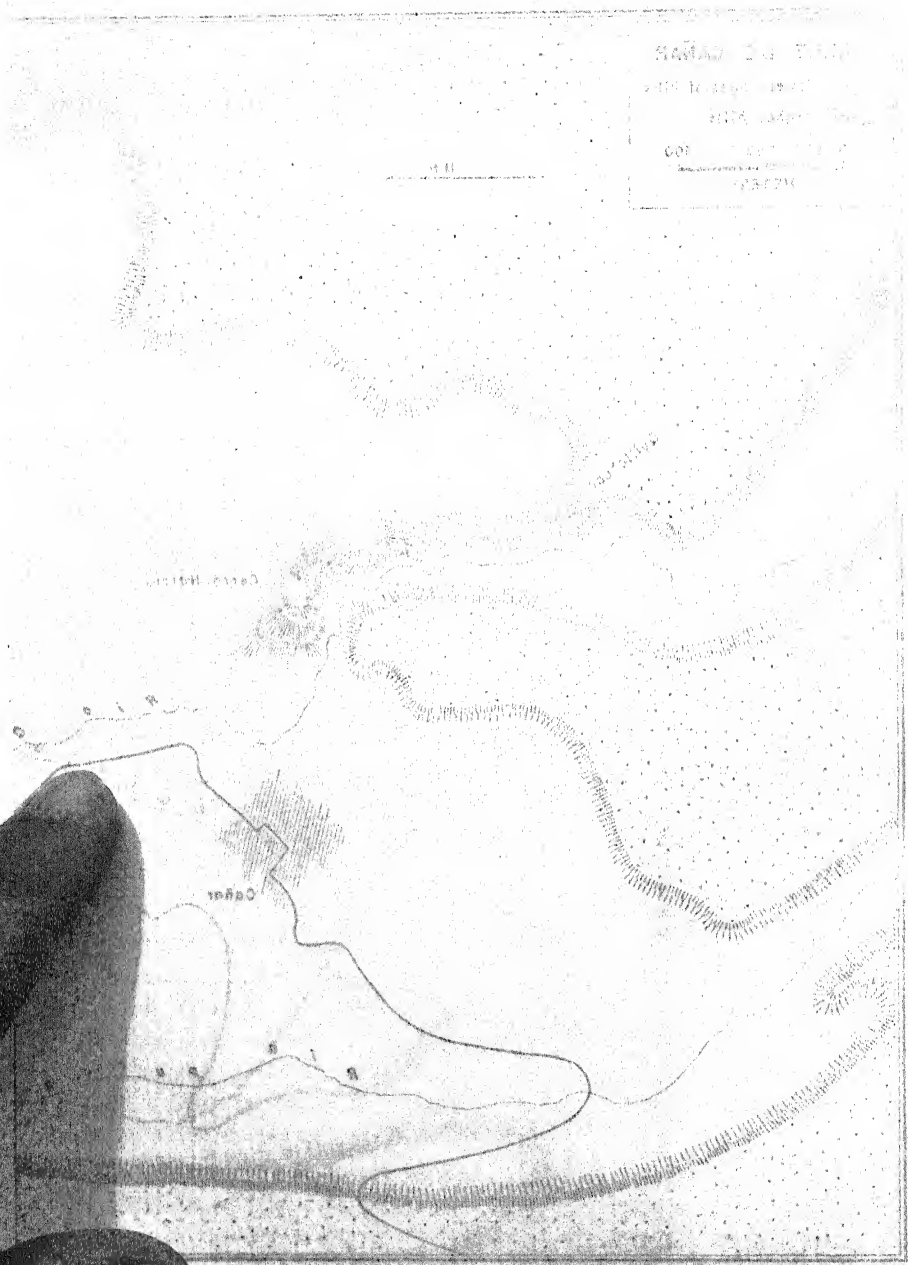
The hill showed the signs of these efforts. A heavy, crunching carpet of Red-on-Buff sherds covered its lower reaches and upper platform. Large holes and yawning caves, only half filled by wind and rain, were everywhere, and in places the contours of the hill had been considerably altered (Pl. 13, lower; Pl. 14). It seemed as if everything had been disturbed and no place was available for excavation. But the remarkable quality and wide variety of our surface collections, as well as the assurance of Uhle that the site was stratified, indicated that a concerted effort should be made to find undisturbed spots where the "Mayoid" cultures could be dug for and studied.

#### EXCAVATIONS

Eventually we stayed in Cañar a month, and with a crew of eight laborers sank sixteen trenches and test pits on various parts of the hill (Map 3). These trenches varied from 1 by 1 to 4 by 12 meters and they usually were more than 2 meters deep, some going even beyond 3 meters. Interest in treasure-hunting was still sufficient in Cañar to make it necessary to guard our excavations at night to prevent looting.

An excavation technique was employed that was adapted to such a disturbed site. Frequently, separating walls were left standing between the holes dug by treasure hunters. Such land-bridges

<sup>1</sup> Uhle was present at the height of these activities and observed the treasure hunters at work. He acquired pottery and objects of metal from the diggers, and this is the material he has reported on. He did not carry out systematic excavations at Cerro Narrío.



Scale of Miles  
0 1 2 3 4 5  
Scale of Feet  
0 100 200 300 400 500  
Scale of Feet  
0 100 200 300 400 500

Cape Henry

Oran

Map of

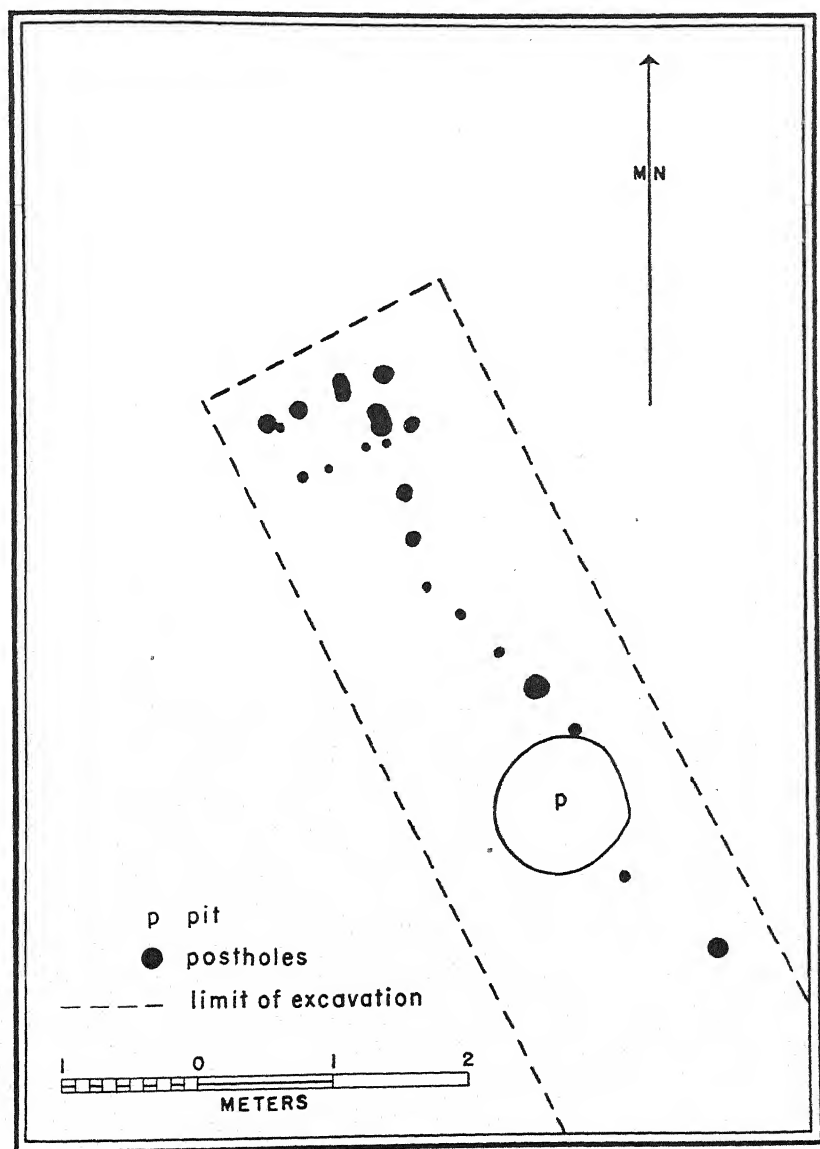


FIG. 4. Plan of north section of Trench 1, Cerro Narrio.

represented perfect testing grounds, and after preliminary clearing to see any possible natural strata in the soil or any evidence of disturbance, these were stratigraphically excavated. In such cases the vertical cutting method was used, with objects and sherds from every level carefully separated. Where pits had to be sunk, the levels were always 15 cm. thick, while in cases where natural stratification could be seen before digging, excavation followed natural lines, returning to artificial 15 cm. levels only when no strata could be discerned.

The trenches on the top platform of Cerro Narrío, Nos. 6-10, were shallower than the rest. This proved significant, as later analysis showed that this part of the hill was inhabited only during the later period of occupancy.

Apparently the whole hill had been occupied at one time or another, and houses were located in trenches 1, 3, 4, and 6. On the whole, however, there seems to be some discrepancy between the number of houses and the immense quantity of ceramic material found. Uhle has suggested that parts of the hill were used only for ceremonial purposes. It has also been suggested that this pottery was used as grave goods by a people attaching considerable importance to seeing that their dead went to the other world fully equipped with ceramic utensils. Be this as it may, the hill gives the impression of a gigantic ceramic trash heap, and 33,434 sherds whose provenience was certain were recovered, not counting several thousand sherds picked up on the surface because some special feature of shape, texture, or finish had caught the eye of the investigator.

The trenching and test pitting were done in an attempt to cover methodically the different parts of the hill.

*Trench 1* was 10 meters long and 2 wide. It was sunk in the lower reaches on the west side of the hill in a relatively undisturbed area. The levels were all 15 cm. thick, and the trench was 2.20 meters deep. Five burials, flexed and apparently in sitting position, were uncovered. Four of these burials contained no grave goods, and the fifth, which probably contained copper objects, was robbed during the night, before guards had been posted. These burials were covered with piles of boulders. The northern part of the trench contained charred maize in level 9, and a pit and postholes cut into the hardpan at a depth of 1.80 meters (Fig. 4; Pl. 15, upper).

A 6-meter profile (Fig. 5) was drawn on the east side of the trench and a 1 by 1 meter test pit sunk in an apparently undisturbed

area of this face, in order to check through vertical cutting the results achieved through horizontal excavation.

*Trench 2* (2 by 2 meters) was on the east side of the hill. Hardpan was reached at a depth of 60 cm. But for some intrusive engraved sherds, little was recovered from this trench.

*Trenches 3 and 4* were sunk in a terrace on the east shoulder of the hill. Originally 2 meters square, these trenches were enlarged to follow out posthole structures which were uncovered.

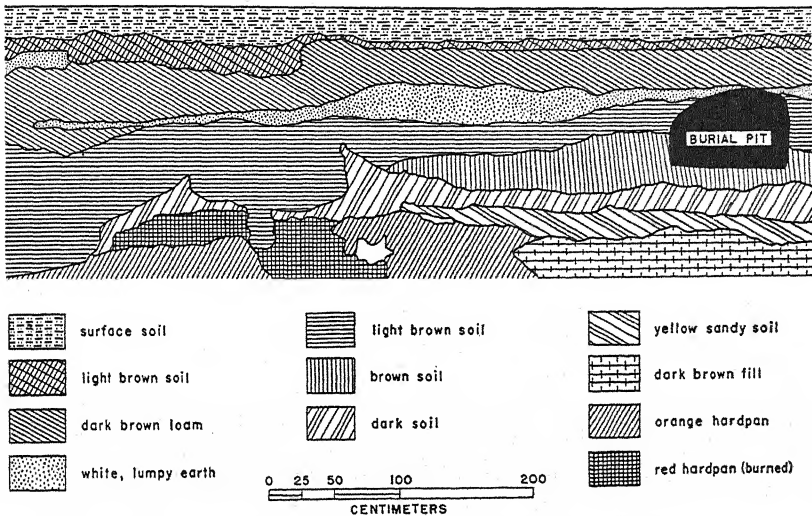


FIG. 5. Vertical section of east wall of Trench 1, Cerro Narrío.

*Trench 3* was begun as a pit 2 meters square and cut down in 15 cm. levels. Postholes were found in the fill at a depth of 50 cm. The trench was then enlarged to follow out the postholes, revealing a rectangular posthole structure measuring 4 by 4 meters in the north end of the trench (Fig. 6), and a profusion of small, shallow postholes in no discernible order in a southern extension of the trench. The original 2-meter square was then cut down in 15 cm. levels until hardpan was reached at a depth of 2.45 meters. In level 7 an alignment of rocks was uncovered. Below these were three adult burials. The bodies were tightly flexed, two lying on the right side and one on the face. There were no artifacts associated with these burials.

*Trench 4*, on the terrace to the northeast of Trench 3, was likewise begun as a pit 2 meters square. At the bottom of 60 cm. of



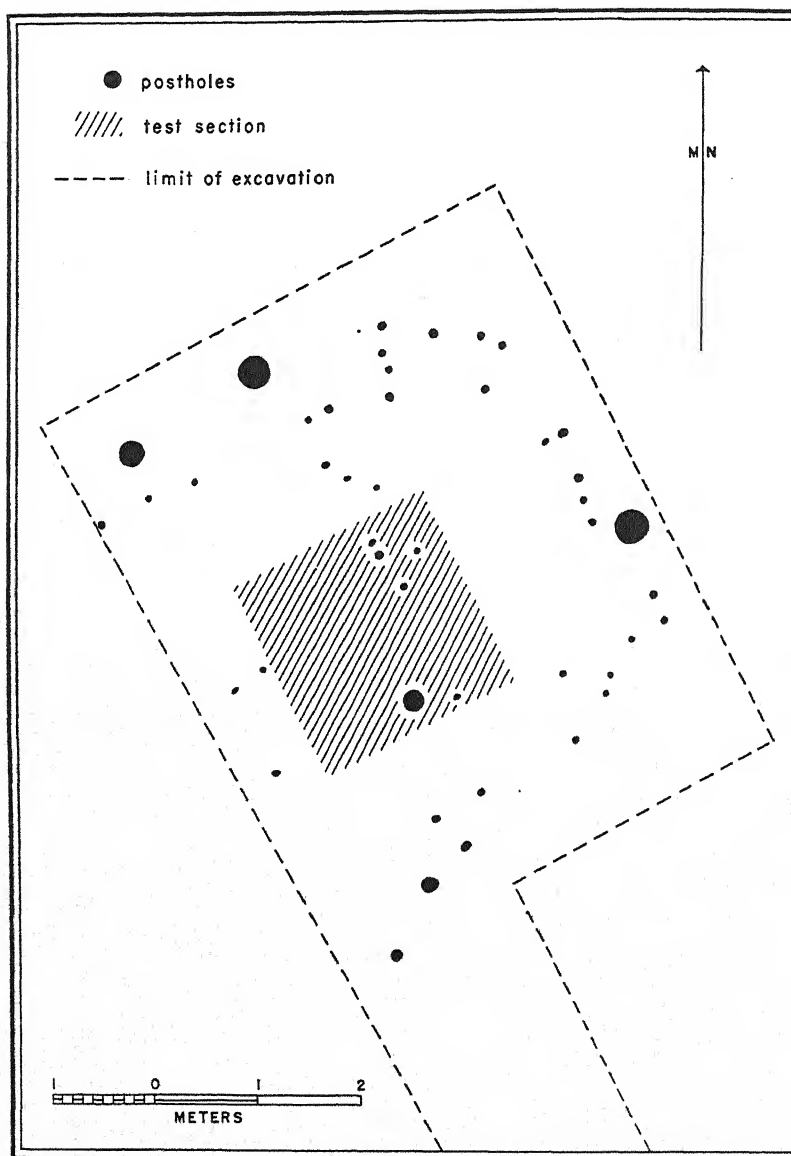


FIG. 6. Plan of Trench 3, Cerro Narrio, showing postholes of Late house.

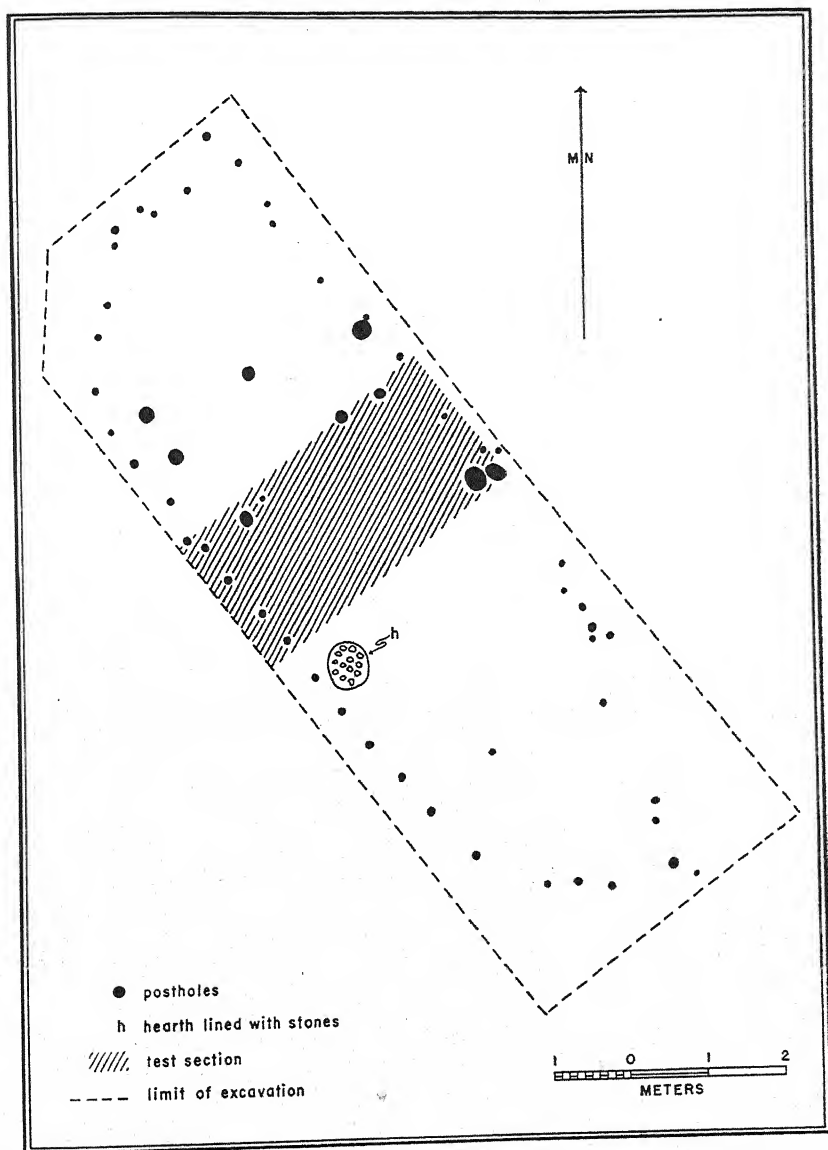


FIG. 7. Plan of Trench 4, Cerro Narrío, showing postholes of Late house.

fill rich in coarse, thick sherds, four postholes were found in a line parallel to the direction of the terrace. The line of these holes was followed by means of a narrow trench, revealing a rectangular structure 4 by 11 meters, with rounded corners on the inner side of the terrace (Fig. 7). The fill inside the structure was then removed.

Next the whole structure was cut down 25 cm. in two levels in an attempt to find a floor. Sections of well-packed floor were found at the bottom of the second level but did not extend over the whole structure. At this level there was much ash, evidence of charred, matted *paja*, and a well-made stone-lined hearth (Pl. 15, lower). The postholes extended from 15 to 25 cm. below this level. The original 2-meter square, enlarged to 2 by 4 meters, was then cut down in 15 cm. levels until hardpan was reached at a depth of 2.50 meters. Six small postholes in a line parallel to the terrace were found cut into the hardpan.

*Trench 5* was on the west slope of the hill; 2 meters wide, 1.10 meters deep, it was abandoned after one meter of excavation because of the poor sherd yield.

*Trench 6* was on the top platform of Cerro Narrío, one of the most pitted places on the hill. Huge holes, 10 meters and more in diameter, had been sunk by the treasure hunters, and folklore had it that some were from 7 to 10 meters deep.

Many boulders studded the place and the local people claimed that "walls" were to be found everywhere. It was decided to investigate this claim and to see what new data could be obtained about ceramics.

A rectangular structure of boulders and some postholes were found, evidently a room in a large multicameral structure (Pl. 14, lower). Unfortunately this was impossible to follow out because of the pitting. Even the walls of this one room had been bitten into twice (Fig. 8). Several test pits were sunk inside and outside the structure. Another posthole wall was found lower down, in the hardpan at 1.60 meters (Fig. 9), but could not be followed out because of the coming of the rainy season, which made impossible the removal of the large amount of overburden.

*Trench 7* was dug near Trench 6 in an attempt to check the data from the latter. A combination of natural and artificial levels was used, and the trench was carried to a depth of 1.25 meters.

*Trench 8* had some very clearly delimited natural levels, though it also showed mostly evidence of a later occupation. It was 1.45 meters deep.

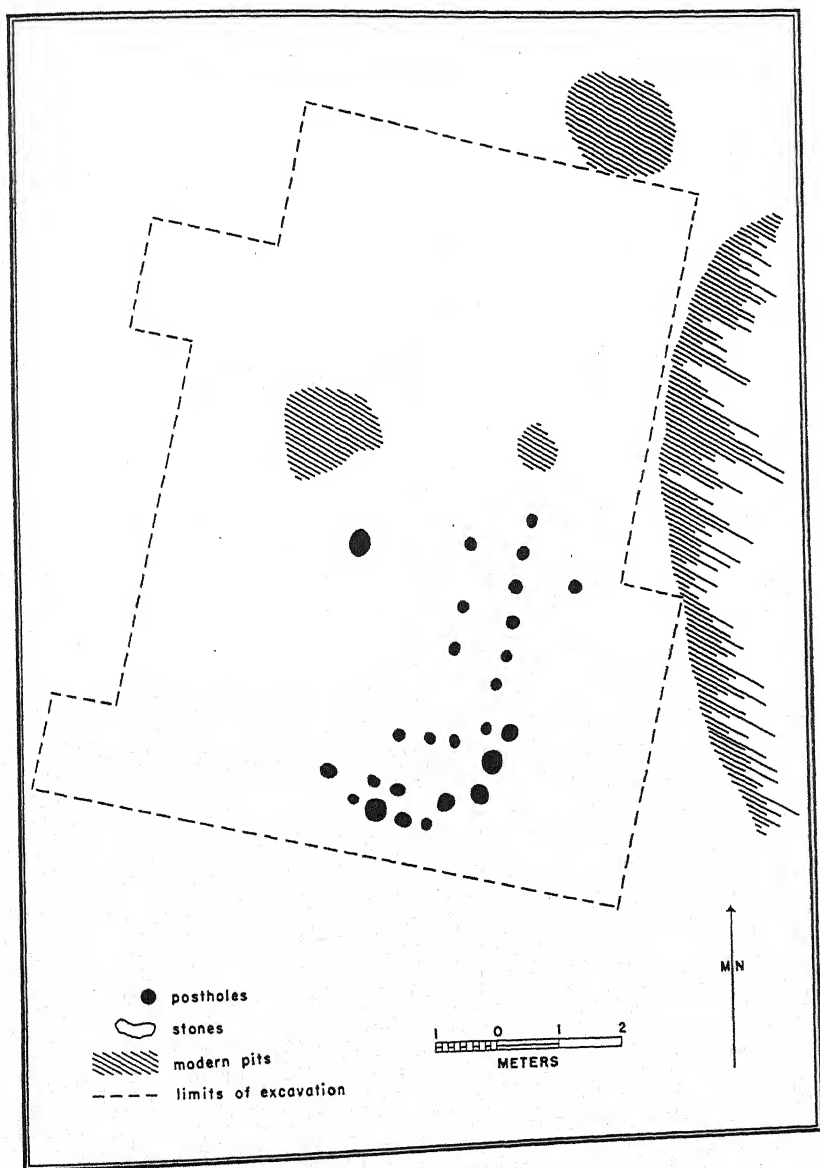


FIG. 8. Plan showing postholes and stones of upper house in Trench 6, Cerro Narrío. Superimposed transparent sheet shows stones which lay immediately above postholes.

*Trench 9* was sunk at the northern edge of the platform, and although it went deeper than the other trenches it was notably late in time. At a depth of 1.80 meters we encountered a row of boulders which could have been part of a wall surrounding the platform, but time prohibited closer investigation. Hardpan was reached at 3.10 meters.

*Trench 10*, one of the smaller pits, was quite shallow and was excavated in natural levels alone. It was 1.70 meters deep and one meter square. It was consistent with the other trenches on top of the hill.

*Trenches 11-14* were sunk on the northeast promontory of the hill, which had been declared peculiarly "Mayoid" by Uhle. The promontory proved to have been unevenly occupied, for Trench 11 contained only the Early horizon of occupation, while in the other three trenches both Early and Late horizons were found, although there the early horizon was not as rich or as deep as in Trench 11.

*Trench 11* was 2.30 meters deep, and pottery typical of the later period was almost completely lacking. The Early wares in this trench were remarkably rich and abundant.

*Trench 12* was 1.50 meters deep and dug in artificial levels of 15 cm. It was shallower than the other trenches excavated in this part of the hill because it was farthest out on the promontory, where apparently the hill had been less intensively occupied. Both Early and Late horizons were represented.

*Trench 13* went down to 1.95 meters into what probably was an area of fluctuating use, as the sherd yield varied considerably from level to level.

*Trench 14* was 2 meters deep, and the sherd yield was poor, although conforming to the pattern of trenches 12 and 13.

*Trench 15* was on the southwest side of the hill. Hardpan was reached at a depth of 2.60 meters. The sherd yield was abundant and typical.

*Trench 16*, not far from Trench 15, was carried to a depth of 2.10 meters. Postholes were found in level 8, but the rains prevented closer investigation.

#### POTTERY

The basic ceramic type found in all the trenches at Cerro Narrío, the type which so attracted Uhle, is a buff pottery that is decorated with red painted bands: Narrío Red-on-Buff. There are several varieties, and the one that particularly attracts attention

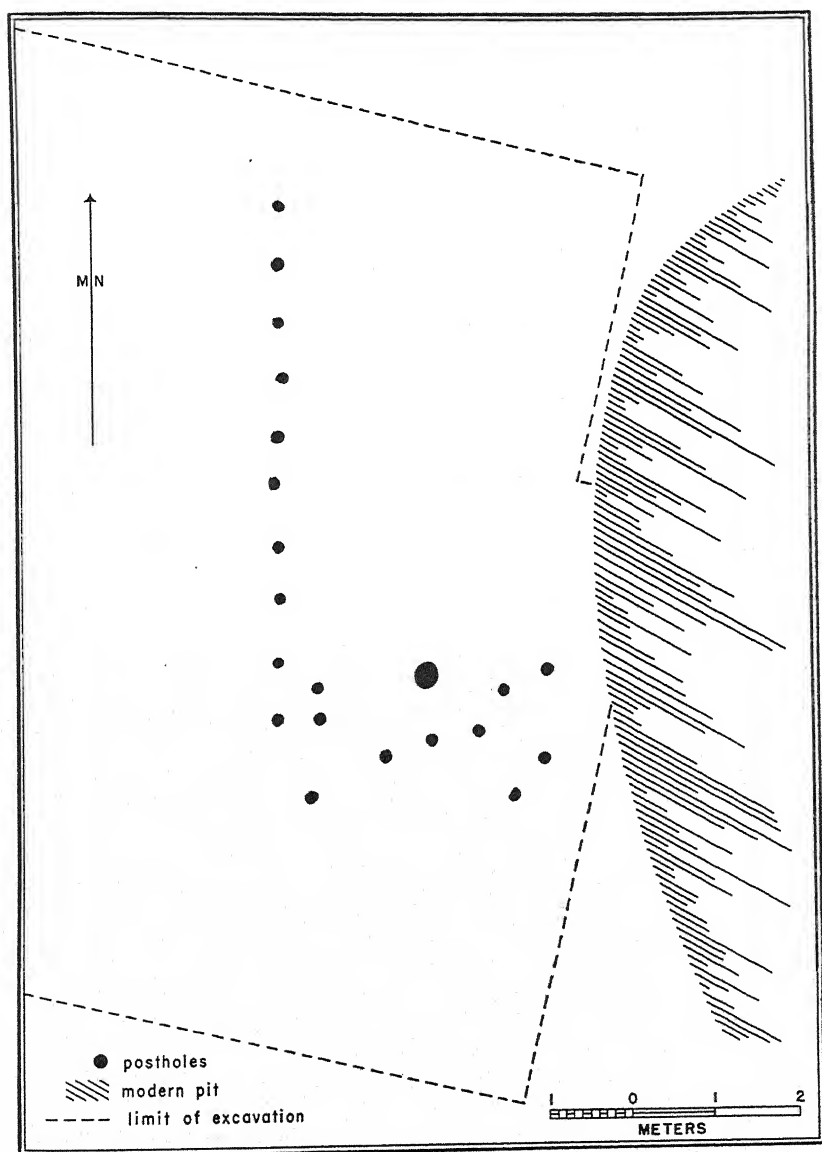


FIG. 9. Plan showing postholes of lower house in Trench 6, Cerro Narrio.



is Narrío Red-on-Buff Fine, an unusually delicate and characteristic ware.<sup>1</sup> Although these wares have been found elsewhere in the southern highlands, their description was attempted only once (Uhle, 1922c) and in that case it followed non-stratigraphic excavation. As whole vessels of this ware are exceedingly rare, careful excavation is doubly important. It was therefore felt by the authors of the present report that new names had to be devised to designate the separate wares and their subdivisions.

The names heretofore applied to Cerro Narrío pottery are not limited to pottery forms alone, but are terms applying to whole "civilizations," established sometimes on only one trait. Thus the terms "Mayoid" ware or "Chaulabamba" pottery refer to a whole series of ceramic forms, some of which belong to a later horizon, that of the "clay seat" or "clay drum" period.

The method used in this report is to give a separate name to each ware, regardless of the "civilization" or period to which it belongs. According to accepted procedure, such a designation contains a geographic name, usually the focal site, and a neutral descriptive term (e.g., Narrío Red-on-Buff). Qualifiers can be added to distinguish sub-types.

As will be seen, we have been sparing in our creation of ware names. Many different wares of intrusive character are represented among our pottery. We have avoided any designation which might be misleading, and have added a geographic name only when origin was certain. In all other cases, our references are purely descriptive (e.g., Black Engraved, Glossy Red Engraved).

Whenever such intrusive wares belong to ceramic types identified elsewhere, we have refrained from tampering with the original designations (e.g., Elen Pata, Tuncahuán). For the sake of convenience we have used these already published names, despite the fact that they are unsatisfactory because they designate simultaneously a ware or group of wares and a civilization or cultural period.

#### CERRO NARRIO WARES

##### NARRIO RED-ON-BUFF

Narrío Red-on-Buff is the basic ware in the Cañar Valley, 13,028 sherds, or 39 per cent of the total excavated at Cerro Narrío, belonging to this ware. It is found throughout all periods at Cerro

<sup>1</sup> In this report we have used the term "ware" in a general sense to refer to pottery types and to broader ceramic groupings.

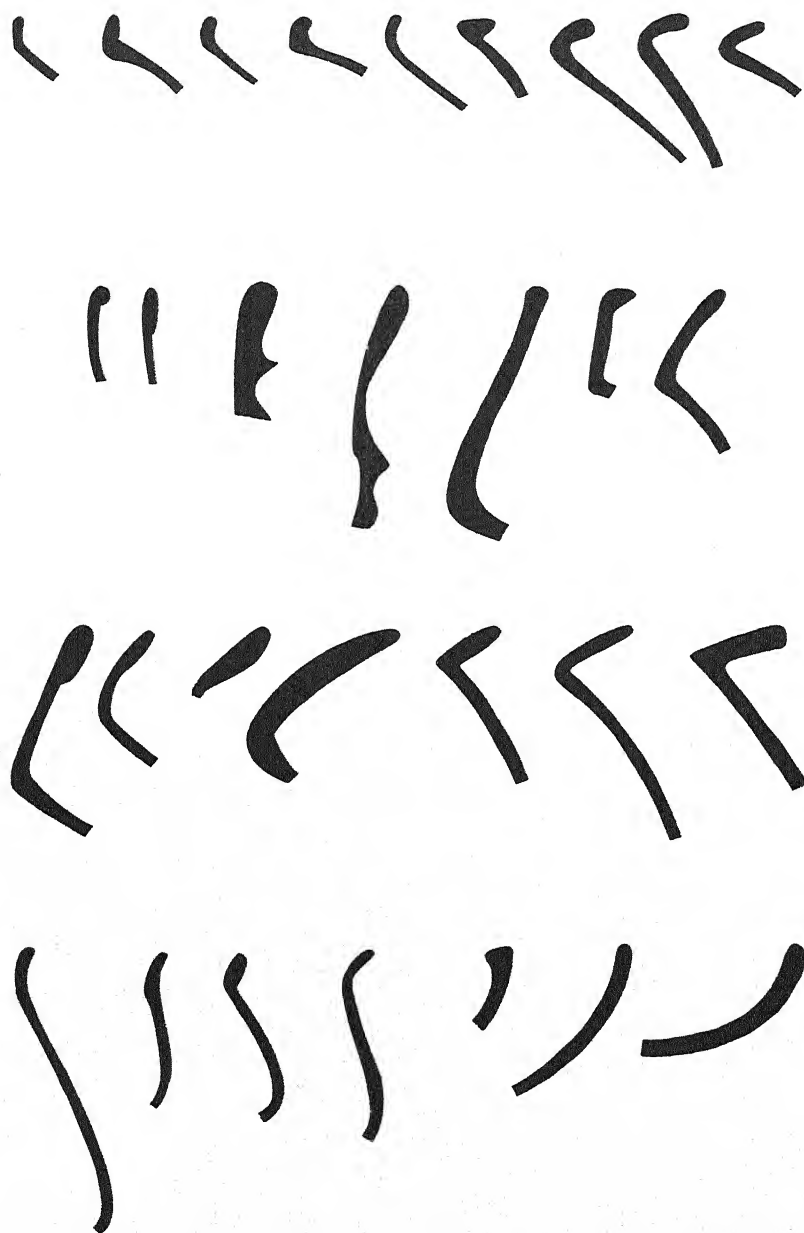


FIG. 10. Narrio Red-on-Buff rim forms. First and third rows, flaring rims of jars; second row, vertical and flaring rims of jars, and tall jar rims with sharp ridges; bottom row, Late jar and bowl forms. All rim profiles are shown with exteriors to right. Scale 1:2.7.

Narrío, although minor specialized forms and variants occur only at certain levels.

*Color and Paste.*—The color is usually light buff and the range is not wide. It is well worked and finished pottery. The core of the sherd is rarely blackened in this basic ware. Thickness varies from 3.5 to 8.5 mm. Hardness varies from 3 to 4.5 (Moh's scale).

*Form.*—The globular jar with flaring rim, standing 20 to 30 cm. high, is the common shape (Fig. 10; Pl. 16, Fig. 1). This jar is found consistently through all levels. In addition, the occupants of the upper levels made smaller jars, usually low-shouldered but otherwise similar to the basic form (Fig. 10; Pl. 16, Fig. 11; Pl. 17, Fig. 1). Bowls were also found in upper levels. For additional discussion of these see Variant D.

*Surface Finish and Decoration.*—The vessels are well smoothed and uniform. The inside of vessels frequently shows impressions of the grass-covered tool used to smooth and build the vessel. The outside was probably smoothed by clay or stone tools, which are described under "Artifacts."

In the immense majority of cases the lip of Narrío Red-on-Buff vessels is painted red and well polished. There are usually several red bands painted on either the inside or the outside of the vessels (Pl. 16, Figs. 2, 3, 5, and 7). The outside at the widest diameter is usually girdled by a red band. All such red bands are polished, while the buff original paste is not. In Narrío Red-on-Buff such coincidence between painted and polished areas, while close, is not so perfect as in Narrío Red-on-Buff Fine.

The painted bands on a few jars of the late type discussed above are not red, but a mottled red and white, red and black, or white and black, with uneven polishing (Pl. 17, Fig. 1).

Line luster, a polishing technique which consists of single stroke polishing of the unfired vessel in such a way as to obtain a design, is frequently employed on Red-on-Buff pottery (Pl. 17, Figs. 2-6), although regular patterns are less frequent than in Red-on-Buff Fine.

Besides those mentioned above there are certain other decorative elements that occur only occasionally. Thus small handles are sometimes found low on the neck where it joins the body of the vessel.

Some jars with flaring rims and taller necks have a sharp ridge on the neck midway to the body (Fig. 10, second row; Pl. 17, Fig. 7; also Verneau and Rivet, 1922, pl. 24, fig. 6). On rare occasions the body is ornamented with a low pinched line at shoulder level (Pl. 18, Figs. 1-3). A few of these sherds come from low, wide-mouthed

jars, and in addition to a line of punching or wide incisions on shoulder or neck, these have a series of painted, unpolished, thick and irregular purple lines, running from rim to shoulder where they meet a band (Pl. 18, Figs. 4-6). Appliqué festoons and notched welts are found occasionally on the upper part of the body (Pl. 18, Figs. 7-12).

Beyond these standard forms and decorations, we also found several variants. They are characteristic but infrequent forms. Two of them (A and B) are limited to a few sherds, and their connections with the basic Red-on-Buff, while probable, are not certain.



FIG. 11. Rim forms of Narrío Red-on-Buff, Variant C. Scale 1:1.8.

The two others (C and D) are a little more frequent and their affiliation with Red-on-Buff is undoubted.

*Variant A.*—Limited to early levels of the hill are shoe-shaped vessels, with a notched or punched-in welt running to the toe along the middle of the upper (Pl. 19, Figs. 1-4). From this vertebral welt, parallel, thick luster lines run perpendicularly towards the bottom. The uppers are slipped a dull red.

Investigation may prove this variant to be a ware by itself. Shoe-shaped vessels have a wide distribution in the Andean area.

*Variant B* also occurs rarely. These small, squat jars with flaring rims are limited to the earlier levels (Pl. 19, Figs. 5-8). The rim is flattish and shows numerous short, white painted lines on the red-slipped lip. On the body, a white line runs in wide scallops around the vessel, circumscribing the polished area below. The white line may be limited by an incision or by punctates. In one case scallops are replaced by triangles, similarly delimited.

*Variant C* is much more frequent than variants A and B, and runs up to 2.6 per cent of all sherds, and 6 per cent of Narrío Red-on-Buff. It is consistently found in lower levels. The vessels are

usually globular or elongated jars with flaring rims (Fig. 11). But for a thin red polished line on the lip, they are unslipped and unpolished. The area between rim and shoulder is always incised (Pl. 19, Figs. 9-13). It is usually first divided into triangles which are then hatched in with parallel lines. This pottery frequently shows signs of fire blackening on the bottom. It is thinner than standard Red-on-Buff ware, ranging from 2 to 4.5 mm. in thickness.

*Variant D* differs from the others by being limited to the upper trench levels. It contains two new shapes in Narrío Red-on-Buff ceramics: the bowl (Fig. 10, bottom row) and the compotera. It also introduces two new decorative elements, inside painting of a vessel and zoned punctates.

The bowl and the compotera are closely related forms, the second being a footed bowl. In Variant D these forms are both fairly small and quite thin-walled, the average thickness being less than that of standard Red-on-Buff pottery. The lip is painted and polished red. Usually, below the lip the inside shows several thin, parallel, painted and polished bands (Pl. 20, Figs. 1, 3-4). The inside of the bowl is customarily divided into quadrants by red lines. The quadrants are filled with diverse painted designs, red dots being the favorite decorative element. Wavy and zigzag lines, short lines perpendicular to the two axes, and loose scrolls or hooks are also used (Pl. 20, Figs. 4-7). On the outside there are several painted and polished bands. In between painted bands there are punctate lines and zones, frequently delimited by incised lines (Pl. 20, Figs. 8-11).

Feet of Red-on-Buff compoteras are quite low. They are unperforated. The outside is usually incised, the step-design being a preferred motif (Pl. 20, Figs. 12-13). Occasionally there are no incisions on the foot, but only a red band around its base (Pl. 20, Fig. 14), an analogy with the painted lip, a basic and standard characteristic of all Narrío Red-on-Buff pottery.

A peculiarly shaped, though probably related vessel is pear-shaped and has several red stripes running from the neck and meeting a red band below the shoulder. Zoned punctates are punched into the unslipped corridors (Pl. 20, Fig. 18).

Finally, similar to Variant D, though not necessarily identical, is a small group of jars with nail impressions on neck and upper body (Pl. 20, Figs. 15-17, and 19).

#### NARRIO RED-ON-BUFF FINE

Narrío Red-on-Buff Fine is a spectacular pottery, thin and very delicate, which is typical of the lower levels at Cerro Narrío.

This was the prototype for Uhle's "Mayoid" ware, or, as Jijón called it, Chaullabamba. Although 10,566 sherds of this type were found (31.6 per cent of total sherds from Narrío), not a single complete vessel was recovered. One whole jar is owned by the colegio in Cuenca (Pl. 21, Fig. 3). It is so light that the breeze in the corridor blew it about when we were photographing it. Uhle illustrates some reconstructed vessels which seem also to belong here (Pl. 21, Figs. 2 and 10).

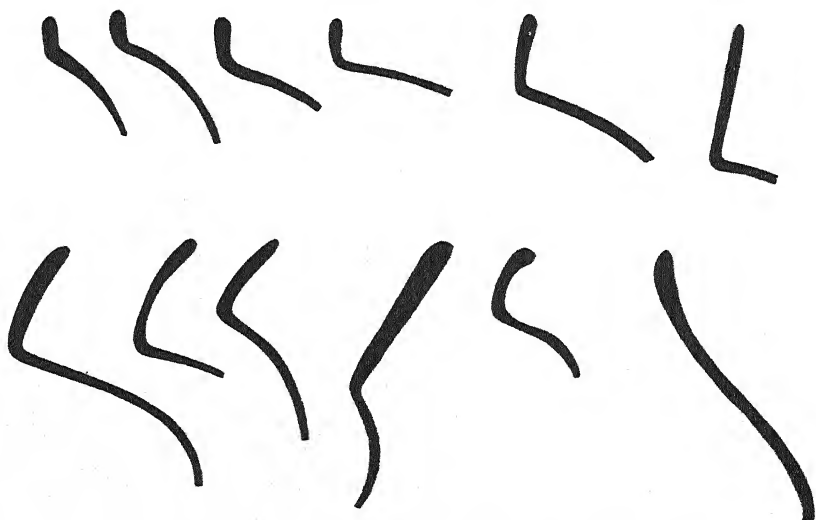


FIG. 12. Narrío Red-on-Buff Fine rim forms. Scale 1:1.8.

*Color and Paste.*—As stated, it is very thin, uniformly light buff pottery. The thickness varies between 1.3 and 4 mm., with most sherds falling between 2 and 3 mm. Rims are considerably heavier. The whole is well kneaded and very well fired, the core being consistently black. The hardness varies between 3.5 and 5. When dropped, the fragments give a characteristic metallic ring. Although it would seem that such thin ware could not be readily used for cooking, the bottoms of some of the vessels have been blackened by fire and have carbonized matter adhering to the inside.

*Form.*—As in standard Narrío Red-on-Buff, globular jars with flaring rims are the usual form (Fig. 12; Pl. 21). Elongated jars occur infrequently, and so do short vertical rims. Small bowls are rare.

*Surface Finish and Decoration.*—The vessels are well smoothed. Red bands are frequently painted on the rim and the shoulder of



the vessel. Of 2,087 rims examined, only 46 have no red painted band. All others have at least a band on the lip proper, while 693 (33 per cent) have one or more bands on the inside, 522 (or 25 per cent) on the outside, and 396 (19 per cent) are painted on both sides (Pl. 21, Figs. 4-9). These painted bands are usually polished, particularly those on the inside of the rim. Outside bands are sometimes left unpolished. Whenever polishing occurs it is very carefully limited to the painted band, with the exception of the rim insides which have overall polishing. The inside of the vessels is usually undecorated.

The plain area between rim and shoulder is occasionally painted with spirals, commas, dots, zigzag and vertical lines or other geometric figures (Pl. 22, Figs. 4-12; Pl. 23, Figs. 5-11).

Line luster (see p. 48) is not as frequent as in standard Red-on-Buff pottery, but is usually more delicate and forms clearly discernible patterns (Pl. 22, Figs. 10-19; Pl. 23, Figs. 1-4).

In less than one per cent of cases, the vessels are not smoothly globular, but have several bulbous areas separated by depressions, which may be incised (Pl. 23, Figs. 5-7). Short, vertical rims are frequently associated with such forms. Each projection is painted red and polished, and may be bordered by a row of red, unpolished dots (Pl. 23, Figs. 5, 8-11).

Small, snug-fitting handles are found infrequently on the neck (Pl. 21, Fig. 5; Pl. 22, Fig. 3). They are not functional.

Occasionally, particularly on bulbous vessels, zoomorphic heads are placed on the body near the rim or projecting from it (Pl. 21, Fig. 2; Pl. 23, Figs. 12-14). Tiny lugs protrude on rare occasions from the lip.

Sometimes also, but very infrequently, vessels from lower levels have anthropomorphic decoration below the rim. As no whole vessels showing this decoration have been found, our understanding of them is limited. The nose and ears are usually in low relief while the eye is a depressed circular area in which a pellet of clay has been placed (Pl. 24, Figs. 1, 2, 4, and 6; Uhle, 1922c, fig. 76B). So far as we know there is no parallel for this type of face elsewhere in Ecuador.

In the upper levels the face changes, with the nose in more salient relief, with perforated nasal septum (Pl. 24, Figs. 7, 10-12). The eye is a "coffee-bean" eye (see Jijón, 1927, vol. 1, pls. 25, 40, and 46).

## CAÑAR POLISHED

*Color and Paste.*—The color of this ware is buff, occasionally varying to gray. The paste is fine, even, and very well fired, the core being black to within 0.5 mm. or less of the surface. The temper is fine and evenly distributed. The paste varies in hardness from 4 to 5. Walls are 3.5–6 mm. thick.

*Form.*—The only forms are bowls and plates (Fig. 13). The bowls usually have ring bases, but not always. Bowl walls may be straight or curved. The plates are usually quite flat. The rims of a few bowls are finished in wide scallops (Pl. 25, Figs. 1–2; Pl. 26, Figs. 1–3). There are two examples of large shallow bowls with wide flaring rims (the larger is 28 cm. in diameter). These are atypical in form in their large size and in the fact that they lack polish on the interior surface; but in all other respects they fall into this classification (Fig. 13, third row).

*Surface Treatment and Decoration.*—The pottery is uniformly smooth and well finished. There is usually a red slip on one or both surfaces, as follows:

	Per cent
Slip on both surfaces.....	39
Slip on interior only.....	20
Slip on exterior only.....	17
No slip.....	24

All surfaces are usually highly polished. It should be noted, however, that the bottom exteriors of bowls with ring bases are almost never slipped and are often unpolished. The interiors of the bowls with flaring rims mentioned above are unpolished, as well as unslipped. Cylindrical bowls generally have unslipped and unpolished interiors. These bowls are lightly engraved with parallel straight and curved lines on the exterior surface, and have small, unslipped, polished lugs on the outside near the base (Pl. 25, Fig. 5). The unslipped interiors of bowls and plates are sometimes decorated with negative dots, hooks, scrolls, or wavy designs (Pl. 26, Figs. 5–9).

Cañar Polished is found largely in lower levels, and it comprises 4.06 per cent of all sherds. The outer surfaces are never fire-blackened. A type found in lower levels which appears related to Cañar Polished consists of large jars with flaring necks and constricted rims (Fig. 13; Pl. 26, Fig. 10). The lips and the outside of the rims have a red slip, and are well polished. The necks are unslipped and unpolished and bear appliqué buttons. Occasionally on the exterior of the body (probably on the shoulder) are small, circular, molded faces. These faces are placed on the vessel before slipping, and are

made by applying to the vessel wall a circular lump of clay into which are punched round holes for eyes and a horizontal groove for the mouth (Pl. 26, Figs. 12-13). Interiors are unslipped and unpolished. Exteriors of bodies are slipped and polished. Frequently the polish consists of line luster forming a criss-cross pattern (Pl. 26, Fig. 11).

#### GRANULATED WARE

There is only one type of heavy, thick pottery coming from lower levels. It is not very frequent (666 sherds, or 2 per cent of the total number). The type is most abundant in trenches 1 and 4, and is completely absent from the trenches on the upper platform, on which is found a later occupation.

It is thick pottery, 4 to 11 mm., and is heavily tempered. The color is gray to buff.

The forms seem to run to large globular storage jars. The outside is finished with a brushed technique, giving it a bumpy, granulated surface (Pl. 27, Figs. 1-3). The inside is smoothed, with clearly discernible marks of the bunch of grass used in smoothing. The body is frequently fire-blackened.

Because of the small number of sherds and the fact that only one is a rim sherd this ware is not clearly understood. In preliminary investigation we called it "Granulated" and recommend the name for use until more is known about this type.

Even less is known about 22 other sherds, mostly from upper levels, which on bowl rims and compotera feet show red painted lines, going diagonally, criss-crossing, or branching from a central stem. The color is buff to dark gray and there is no evidence of polishing (Pl. 27, Figs. 4-10). It may well be that this ware is but a late variety of Narrío Red-on-Buff, but the evidence at the present time is not conclusive.

#### NARRIO GROSS

*Color and Paste.*—The paste is gray to buff in color, and is coarse and granular, and relatively soft (3-3.5). The core is rarely blackened by firing. The temper is coarse and is unevenly distributed in the paste. Vessel walls range from 5 to 20 mm. in thickness.

*Form.*—The forms are large jars with flaring rims, sometimes with tall necks, and tripod vessels with *hoja de cabuya* legs, shallow bowls, and deep bowls with horizontal handles (Fig. 14; Pls. 28 and 29). Many of the jars are very large (ranging up to 76 cm. in height and 68 cm. in diameter) and apparently were used for storage.

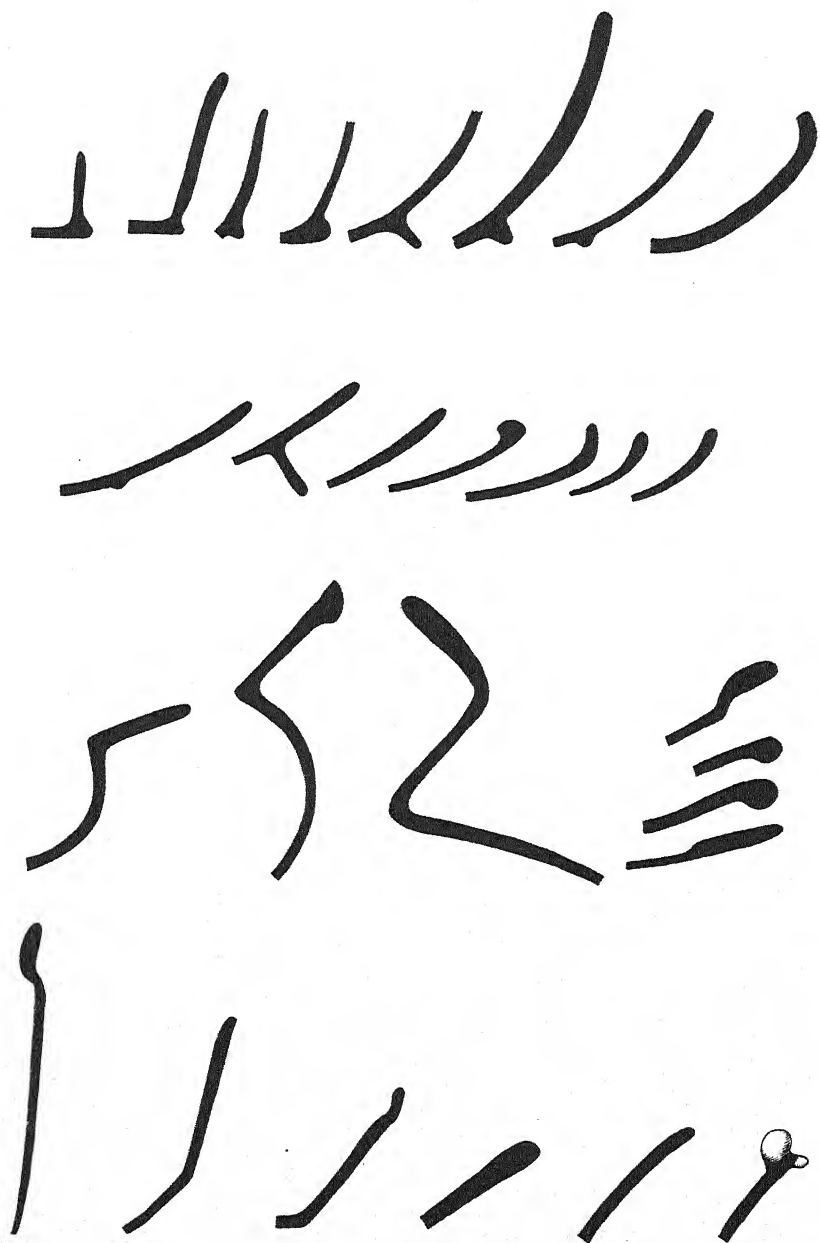


FIG. 13. Cañar Polished rim forms. First and second rows, profiles of plain and ring-base bowls; third row, profiles of large shallow bowls with wide flaring rims, large jar with flaring neck and constricted rim, and plates; bottom row, unusual jar and bowl forms. Scale 1:2.7.

*Surface Treatment and Decoration.*—Surfaces are poorly smoothed and unpolished. Lips of jars and bowls sometimes have a red slip, and the slipped area may be carelessly polished (18 per cent of sherds are slipped, while 10 per cent are slipped and polished). Around the shoulder of one large jar (Pl. 28, Fig. 3) is a raised welt on which are circular depressions about 10 cm. apart.

Narrío Gross is found in the upper levels, and comprises 14.04 per cent of all sherds. It is a thick, coarse, largely undecorated, utilitarian ware. Abundance of fire-blackening on the exterior surfaces indicates its culinary uses. The larger jars were no doubt used for storage purposes.

#### CLAY SEATS OR DRUMS

The second "civilization" which Uhle postulated for Cerro Narrío was the "clay seat" or "drum" civilization. In an earlier work (1922f, p. 243) he called it the Tacalzhapa civilization, but he eventually abandoned this name in favor of the descriptive one, which has also been used by Sr. Jijón (1927, 1930).

The clay artifacts which gave this "culture" its name are large, heavy, cylindrical objects of Narrío Gross pottery (Pl. 30). Fragments are consistently found in the upper levels at Cerro Narrío.

The paste is typical Narrío Gross, and walls are 11.2 to 21.4 mm. thick. These "seats" differ in size and height, some being quite squat, 10 cm. high and 25 cm. wide, others being as much as 30 cm. high. They have cylindrical walls and are hollow. There is no bottom. The upper platform is perforated by a circular hole and is always painted. The design approaches that found on the inside of Narrío Red-on-Buff compoteras and bowls (Variant D). The outside of the cylinder is ornamented with painted or incised designs. The perforated platform is always painted red, or red and white. The step-design is frequently used, as are opposed chevrons, hatched triangles, parallel bands, and occasionally punctates. The use of these objects is unknown. Uhle (1931) believes that they are not seats, but drums, and that they have Chiriquian parallels, but the evidence for these contentions is not conclusive.

#### INTRUSIVE WARES

Beyond the several wares described above, which form the bulk (30,502 sherds, or 91.2 per cent) of recovered pottery, there are numerous other ceramic forms at Cerro Narrío. They are all infrequent, and have been found elsewhere in the Andean area. It is assumed, therefore, that they are intrusive sherds which have



FIG. 14. Narrío Gross rim forms. First and second rows, flaring rims of jars; bottom row, profiles of bowls (bowl at right with horizontal handle). Scale 1:2.7.



reached the Cañar Valley through contact or trade. Their importance is of course much out of proportion to their small number at Cerro Narrío. They indicate the inter-relations existing between Ecuadorean groups at a given time, and through cross-dating they establish chronological relationships of the Cañar Valley with surrounding areas.

All these intrusive varieties are characteristic of the late occupation of Cerro Narrío. The early levels are much more uniform in their ceramic material.

#### GROUP X

*Quartz-Studded.*—An interesting though very infrequent ware is one which for convenience we have called "Quartz-Studded." The ware itself is very similar to Narrío Gross in composition. The basic form is the large "lemon juicer" (Pl. 29, Figs. 3-5), with a central cone raised inside the bowl. The cone is studded with bits of quartz, arranged in linear formation, with incised lines separating the rows. The outside of the bottom (the inside of the cone) is carelessly polished. There is also a fragment of a bowl or plate with ring base, with the bottom of the interior quartz-studded.

Similar quartz-studded vessels are found at Alausí (Pl. 6, Figs. 13-14) and Huigra (Pl. 29, Fig. 6), both in the Chanchan Valley. Talbot (1924, p. 88) found some at Joyaczhí, midway between Huigra and Cañar. The type is also found on the eastern slope of the Andes, at Macas (Pl. 7, Fig. 17) in the Upano Valley, and Uhle (1927a, pl. 34) has reported some for the Esmeraldas coast. According to Uhle these objects were yuca-graters.

*Red Engraved.*—Red Engraved is the temporary name given to a group of small jars and bowls found in the upper levels. The collection at Alausí had a few examples, but the variety is larger at Cerro Narrío.

The pottery is thin (2.3-4 mm.) and characteristically sandy. Both the inside and outside are very well smoothed.

Small jars, 7 to 10 cm. high, straight-sided but with slightly flaring rims, are the typical shape. The walls are sometimes bulging where the bottom meets the wall. Occasionally the rim is straight (Pl. 31, Figs. 1-7).

The outside of the jar is almost completely slipped red. An occasional unslipped band below the rim is the only exception. The engraved designs are within a wide band, occupying most of the outside wall of the jar. The band is delimited by engraved, horizontal

lines. The engraving was apparently done in the sun-dried clay, after slipping but before firing. The engraved designs are contrasting hatched and non-hatched rectangles, concentric diamonds, triangles, rectangles, and occasionally step-designs or zoned punctates. The bottom of the vessel is slipped but not engraved. As at Alausí, the grooves are sometimes filled with limonite, a whitish yellow iron oxide.

The inside of the vessel is smooth and undecorated, but for a circular, red painted band below the rim.

So far this ware has been reported only for Alausí and for Narrío and Shillu in the Cañar Valley.

*Black Engraved.*—Black Engraved is a type of the same family. Its shapes are much the same as those of Red Engraved, but for an increase in frequency of straight-sided jars and the appearance of incurved rims and cylindrical vases.

The pottery is black throughout, well smoothed but not really polished. There is one example here of what we called *Glossy Black Engraved* at Alausí. There is no decoration on the inside of these jars. The outside is ornamented similarly to the Red Engraved, although there is virtually no identity of design. Circles, punctates, zigzags, and crosses are found along with the more typical alternate hatched and unhatched rectangles and concentric diamonds (Pl. 31, Figs. 8-14). Limonite is more frequently used in filling the grooves of this black pottery than is the case with Red Engraved. We found Black Engraved at all three sites in the Cañar Valley and at Alausí (Uhle, 1931, pp. 32-33). Jijón (1930, pl. 28, fig. 8) shows a black vessel with similar ornamentation, from the Manabí coast.

*Gray Engraved.*—Gray Engraved (Pl. 33, Figs. 4-7) is quite similar to Black Engraved. It usually has a polished area below the rim on the inside. One vessel shows a combination of Gray Engraved rim and plain red-slipped body (Pl. 33, Fig. 3).

*Glossy Red Engraved.*—As at Alausí, there is characteristic *Glossy Red Engraved*, a fine, thin pottery (2.6-3.5 mm.) with a buff paste. Cylindrical vases and small open-mouthed jars are the prevalent forms. There are no flaring rims. Small lugs are sometimes found below the rims on jars.

Besides form, this group can be separated from Red Engraved by surface finish and design (Pl. 32; Pl. 33, Figs. 1-2). The outside is slipped red and highly polished. The inside varies, sometimes being polished and at other times plain, but is never slipped. The

only exception (Pl. 34, Figs. 3, 5-6), a vessel which is red-slipped and polished inside and out, diverges also in design.

The step-design is very frequent on the outside of vessels. Circles, crosses, wavy lines and concentric diamonds are also used (Pl. 32). No yellow pigment is found in engraved lines. On several sherds there is a suggestion of tone difference between the engraved zones (Pl. 32, Figs. 2-3), indicating that polishing could have occurred after the engraving had been done.

Tone differences become important in a variant of this ware, which is similar in most respects to the standard described above. While the whole outside of the vessel is polished, paint is applied only to selected areas, circumscribed by engraved lines (Pl. 32, Figs. 5, 7-15). This ware definitely confirms the method suggested above of engraving a sun-dried vessel, then painting it, and finally polishing it. There are no incised vessels in any of these wares. Painting is sometimes carefully circumscribed, in others it is not. Polishing immediately after painting also contributes to the irregular spread of red pigment onto unslipped areas.

The designs are much the same as in the standard Glossy Red Engraved, with the addition of more frequent curved lines, concentric circles, and parallel hatchings of triangles.

Glossy Red Engraved ceramics are found at Shillu and Cerro Narrío in the Cañar Valley, and at Alausí. Additional examples from Narrío are figured in Jijón (1930, pl. 28, fig. 14). This type is related to Black Engraved and Red Engraved, described above and mentioned in our discussion of Alausí. The three are found consistently in similar levels at Cerro Narrío, in close association. Although some sherds were found in almost every trench there are very few in the hill as a whole. Only 116 engraved sherds of all types were found, amounting to 0.35 per cent of the total.

Through design and treatment these Engraved wares show similarities to others found farther south in the Cuenca area mentioned above (p. 28; Pl. 9), which have step-designs on jars with anthropomorphic necks (Verneau and Rivet, 1922, pl. 53).

*Glossy Red Negative.*—Resembling Glossy Red Engraved in paste and finish, but with different decoration is *Glossy Red Negative*. There are very few of these sherds available—no more than ten, including some picked up on the surface. The pottery is very thin, almost like Red-on-Buff Fine. The most frequent forms are small jars and cylindrical vases. The outside shows a negative design on a polished red or orange slip (Pl. 34, Figs. 1-2, and 4). In the case

of one bowl, the slip stops two-thirds of the way down from the rim, but the whole outside is polished. The inside is plain. The negative designs are uniformly very faint, with polka dots, chevrons or concentric rectangles most usual.

These sherds are found at Narrío and Shillu and are not reported from other areas.

*Red Banded Incised*.—Associated with the above Engraved wares is an incised pottery, which, although very infrequent at Cerro Narrío, deserves attention because of its distribution. It has not before been distinguished from similar wares, and we feel that additional excavation in the area will benefit from cross-dating through this characteristic ceramic form.

The color ranges from light gray to buff. It is a thicker ware than the intrusive wares we have thus far described, varying from 5.2 to 9 mm. Although heavy, it is in no way crude. The paste is very uniform and slightly porous.

The shapes are hard to distinguish, because few fragments are available. Wide-mouthed, straight-sided jars with low shoulders seem to be most common.

The inside and outside of these vessels are very well smoothed and in some cases polished. There is no other decoration on the inside. The outside walls are ornamented with red painted designs within incised areas (Pl. 34, Figs. 7-14). The incisions are shallow and were apparently made with a blunt instrument while the clay was wet. The red zones are not very carefully filled out. In one case the shoulder carries marks punched with the same blunt instrument. In some cases the incised lines are very faint or are missing. Some of the designs, such as steps and bands, are similar to those on Glossy Red Engraved sherds. But there are also other designs: rows of isosceles triangles rising from a common base, which may be a circle, a rectangular scroll or the like.

On the whole, because of its designs and its associations, this ware, which we have temporarily called Red Banded Incised, appears to be related to the Engraved ceramics. Its peculiar features, however, separate it distinctly from them and from Narrío Red-on-Buff.

Only nine sherds were found at Narrío, of which five were picked up on the surface. A few more were found at Shillu, and some at Alausí (see p. 25). Several more have come from Macas,<sup>1</sup> on the

<sup>1</sup> We are indebted to Sr. J. Jijón y Caamaño for this lead on Macas pottery. A small collection of sherds, made by Sr. F. Talbot, is now in the Museum at the Universidad Central, at Quito.

eastern Andean slope, where several other wares common to Alausí and Narrío were found (Pl. 7).

At the present time we feel that Quartz-Studded, Red Engraved, Black Engraved, Glossy Red Engraved, and Red Banded Incised form a consistent complex, typical of the Nudo del Azuay region (Alausí, Cañar, and Macas). We have called this complex, Group X.

#### PURUHA-TUNCAHUAN

A group of intrusive ceramics, different from the complex discussed in the preceding pages, and probably later in time, is found at Cerro Narrío, particularly in the trenches located on the upper platform of the hill. The affiliations of these forms are with ceramics found in the Province of Chimborazo.

*Elen Pata.*—A few sherds and whole vessels from Narrío show unmistakable relation to Puruhá ceramics described by Jijón (1927). They are very infrequent, only five bowls and a few sherds belonging to this category. The most common shape is the small, globular jar. A conical lug usually projects from the rim (Pl. 35, Figs. 2 and 4; Pl. 36, Figs. 2 and 4). Two such jars can be connected through a tube (Pl. 35, Fig. 1) or can be placed one above the other (Pl. 35, Fig. 4). Some are unique specimens like the zoomorphic form (Pl. 35, Fig. 3) or the truncated cone with a drinking tube (Pl. 36, Fig. 3).

The inside of these vessels is unslipped and undecorated. The lip is painted red and polished, both inside and out. Some jars have a white, painted lip, and this seems to be limited to the outside only. On the outside wall are incised two parallel lines forming a band, within which opposing triangles are incised (Pls. 35 and 36). Each triangle has several incised chevrons within it. The opposing chevrons do not meet. In the space left between them a zigzag line runs all the way around the vessel. This line is usually painted red and polished. It merges with the red and polished band at the lip. The rest of the incised area is not slipped or polished. Bottoms are also slipped red and sometimes polished. In the cases where white paint is used at the lip the central zigzag line is red, but the bottom is white again (Pl. 36, Fig. 4).

In two cases, there is an additional band below the rim into which rectangular scrolls are incised (Pl. 36, Figs. 5-7). In another, the incised chevrons are red and polished, while the main zigzag is white. A third variant shows opposing chevrons unseparated by any main zigzag, the whole incised area being slipped red (Pl. 36,

Fig. 9). Finally, one diminutive red-slipped vessel with low shoulder shows a faint incised zigzag line within an area similarly delimited (Pl. 36, Fig. 11).

The forms described above tie up quite closely with some Elen Pata vessels illustrated by Jijón (1927, vol. 1, pls. 98-103), who also shows a similar Huavalac form (op. cit., vol. 2, pl. 115). An example of each of these is here reproduced in Plate 35, Figures 5 and 6, respectively. It is very interesting that a vessel of Elen Pata type (Pl. 35, Fig. 3) is allegedly from Inga-pirca, a site predominantly if not wholly Incaic.

While the specific decoration is not repeated, shape, lugs and incised chevrons are found not only in the Puruhá area around Riobamba, but also at Alausí and Zula in southern Chimborazo. Such plain globular jars have also their Narrío parallels in Narrío Gross ware to reinforce the thesis of Puruhá influence in late Narrío.

*San Sebastián.*—Another element of Puruhá influence is the compotera with incised bowl interior. Made of pottery closely resembling Narrío Gross, 7.5-9.2 mm. thick, the bowl stands on a perforated, low foot. The vessel is unpolished and unslipped, although occasionally the inside of the bowl may be slipped red.

The insides of bowls may also be decorated with incised lines. The area is divided into quadrants; two opposing ones have chevrons, the others parallel curved lines (Pl. 37, Figs. 1-2). Some are divided into several triangles with a common apex. Alternate triangles may be filled with punctates and incised lines (Pl. 37, Figs. 3 and 5).

These incised compoteras are very similar to those from the earlier San Sebastián period at Guano (Jijón, 1927, vol. 1, pls. 43-44), of which two are shown in Plate 37, Figures 4 and 6. At Cerro Narrío they are found side by side with other forms stated to be typical of Puruhá such as Elen Pata and Huavalac.

*Tuncahuán.*—A final group of intrusive ceramics can be discussed in terms of the Tuncahuán civilization, postulated by Sr. Jijón y Caamaño (1927, 1930). According to Sr. Jijón's view, this is a basic culture of Central American origin and early chronological position, found on the Ecuadorean coast and throughout the northern Andes as far south as Recuay. In Chimborazo, Tuncahuán is reported to be earlier than any of the Puruhá horizons discussed above (Jijón, 1927, 1930).

Sr. Jijón believes that Tuncahuán is very well represented at Cerro Narrío (1927, pp. 62-63). In so far as its chronological position there is concerned, he was hesitant at first (1927, p. 35,



footnote 2) but later he decided that Early Narrío ("Mayoid" or Chaullabamba) was older (1927, pp. 62, 117) because contemporaneous with Proto-Panzaleo II; still later he concluded that Tuncahuán was older (1930, pp. 138-139, 147, footnote 2), although he conceded that stratigraphic proof from Cerro Narrío was lacking.

Uhle first ignored Tuncahuán as a component at Cerro Narrío (1922d, pp. 25-26). Later he agreed that Tuncahuán was present, having occupied the top of the hill (1931, p. 36, footnote 2). Uhle feels that the "Mayoid" civilization was earlier (1931, p. 34, footnote 1).

At Cerro Narrío we have six different ceramic types that could qualify as Tuncahuán. The ceramic forms of this civilization elsewhere are well illustrated in color by Verneau and Rivet (1922, pls. 32, 54-56), and are pictured by Jijón (1927, vol. 1, pls. 19-26; 1930, pls. 20-27, and figs. 25-27). According to Jijón (1930, pp. 162-164):

The civilization of Tuncahuán is characterized by a peculiar technique—negative decoration with overpaint; that is, the vessels have been ornamented first, through a lost color procedure, and then adorned with red, yellow or white transparent paint, many times without obscuring the (original) design, and frequently making mistakes in covering the negative figures with paint or ignoring those figures completely. It seems as if some time had passed between the application of the lost color design and that of the transparent paint; when the red paint is not applied regardless of the negative, its purpose is to complement this design.

As stated, six different varieties have been found at Cerro Narrío that could fit this description with fair accuracy. For all categories, however, there are only 208 sherds, or 0.6 per cent of the total yield.

*Variant A* is the most numerous, over half of the sherds belonging to it. The vessels are of medium thick ware (3.9-5.4 mm.), frequently well-fired, varying from reddish through gray to well-fired black.

Bowls and compoteras with perforated feet seem to be the only shapes in *Variant A*. The outside of these vessels is plain, unslipped and unpolished, but for a narrow band just below the rim, which is decorated like the inside or is simply a thin, polished band. The inside is decorated with a negative design painted on a cream slip found all over the bowl. Concentric circles, dots and parallel lines are the common designs. The whole inside of the vessel is highly polished. In the center of the interior of compotera bowls, there is a red painted positive disk covering the negative design. There is also some red on the rim, and on the outside band (Pl. 38; see also Jijón, 1927, vol. 1, pl. 24).

*Variant B* maintains the similarity in paste. Bowls, double bowls, and annular-base bowls are the prevailing shapes. The

insides are unpolished and unslipped. The outside shows a negative, dark design painted on the natural clay, which varies in color between orange-pink and buff. The most frequent design is that of a rayed arc. Squares, dots, zigzag lines and opposing triangles with chevrons are found also (Pl. 39). Most of the outside is polished, but for the bottom.

There is a certain similarity between Variant B and the outside treatment of Variant A. This is obviously due to similarity in polished negative design on the natural paste.

*Variant C* has a paste much like that of Variant A. The common shapes are bowls, communicating double bowls, and long-necked jars or bottles of the cantimplora type. As opposed to A, there is no design whatever on the inside of the vessel. An overall pink slip covers the bowls and the necks of the bottles. Irregular lines, painted in lost color technique, form dark concentric circles on bowls and vaguely parallel lines on bottle necks (Pl. 41, Fig. 1). In addition, bowls have a fairly wide white painted line around the rim, covering some of the negative design (Pl. 41, Figs. 2-3). An aberrant form has negative designs on a white slip covering the body, and an orange band below the rim (Pl. 41, Fig. 4).

*Variant D* shows considerable range in paste, shape and decoration. It has a greater range of thickness (3.2-6.7 mm.) than the other varieties. The dominant shapes are cylindrical jars with slightly flaring rims (*kero*), bowls, triple bowls, bottles with or without anthropomorphic necks, compoteras, cantimploras with small handles, and an unusual vessel with a very small aperture (Pl. 40). One *kero* has a small animal head at the rim (Pl. 40, Figs. 2-3, and 5).

The inside is unpolished and unslipped. The outside is usually slipped red or orange throughout. Negative designs are painted over the slip, and spaces within this design are filled in with white overpaint (Pl. 40, Figs. 1-6).

Some of the vessels show no evidence of negative painting—only white paint on a red slip (Pl. 40, Figs. 7-13; Jijón, 1930, pl. 25, fig. 6). These are temporarily included in Variant D because this has been suggested by Sr. Jijón (1927, vol. 1, pp. 34-35). White-on-Red, as we have called it in preliminary classification, is also found at Joyaczhí, north of Cañar, at Guasuntos, near Alausí (see p. 25), and at Macas (Pl. 7, Fig. 16). These sites and Shillu have yielded only the non-negative White-on-Red, which seems to be another argument in considering it apart from Tuncahuán.

*Variant E* is limited to a single fragment (Pl. 41, Fig. 8). It is a bowl with incurved wall. There is no decoration on the inside. The outside is polished all over. On the buff polished surface of the walls there are small step-designs and vertical lines done in lost color. The bottom is similarly darkened. Part of the wall has red overpaint covering some of the negative design, in alternate patches. The red overpaint does not extend to the bottom.

*Variant F* shows no evidence of negative painting but has been included as a Tuncahuán type because of its other similarities. It is one of the more frequent varieties. The shapes run to compoteras and bowls similar to those in Variant A. The outside is smoothed, but is not otherwise decorated except for a band of white polished paint below the rim. The inside is painted and polished throughout and is painted red below the rim and in the center of the bowl, the space between the two red areas being cream color. The circular center spot gives it an unmistakable Tuncahuán appearance (Pl. 41, Figs. 5-7).

As stated, the different varieties of Tuncahuán found at Cerro Narrío are not very numerous and all come very consistently from the upper levels, which bear evidence of a late occupation.

In addition to the above intrusive wares, there are additional forms represented at Narrío by only one or two sherds. They are illustrated in Plates 42-44. Certain incised or engraved sherds in this group may have coastal affiliations.

#### PERUVIAN INFLUENCES

There is no clear-cut evidence of any Peruvian influence at Narrío. The Tiahuanaco people, although alleged to have occupied the Cañar area (Jijón, 1927, vol. 1, p. 134), did not leave any remains which would prove that contention. More specifically, Uhle claims that "the drums [Late Cerro Narrío] have been found in absolute temporal vicinity with the Tiahuanaco style." (1931, p. 39.) He does not enlarge on this statement, nor does he bring any data to support it. There is no evidence in our material to prove any Tiahuanaco influence.

Apparently Late Chimu vessels have been found at Narrío and in Cañar (Pl. 46, Figs. 4-7). Only one of these came from an authenticated source. Their number prevents any doubt as to the reality of Chimu trade connections with the Cañaris. As yet this connection cannot be securely dated, because we have only three or four

sherds that may be of Chimu manufacture. Whatever evidence exists points to a late date.

Max Uhle, who was present in 1922 when the site was being torn apart by treasure hunters, insists that he saw no Cuzco artifacts whatever (1922b, p. 113; 1922d, pp. 25-26). Our excavation, while once or twice producing a sherd that showed familiar Incaic decoration or an occasional horizontal lug (Pl. 53, Fig. 11), was not conclusive in this respect. The only evidence of Incaic occupation is found in the collection at the colegio in Cuenca. A score or more of pots, of undoubted Cuzco cast, allegedly coming from Cerro Narrío, are deposited there (Pl. 45, Figs. 3-9; Pl. 46, Figs. 1-3). The person who assembled the collection, Ezequiel Clavijo, is known to have dug at many other sites in the region, some of which have undoubtedly been inhabited by the Incas. As Clavijo did not keep records until many years after he started digging, the provenience he assigns to given vessels is uncertain.

Even if we conclude that Narrío was not occupied during the Inca period, the site must have been abandoned only shortly before the arrival of the Incas, because at nearby Cashaloma typically Late Cerro Narrío ceramics are clearly associated with Incaic forms.

## ARTIFACTS

### OBJECTS OF STONE

Only twenty-three stone artifacts were found at Cerro Narrío (Pl. 47). Most numerous are tubular or cylindrical beads, of which eight are of serpentine, one is of shale, one of sandstone and one of amphibole schist. The serpentine beads were found in both upper and lower levels, the shale bead came from the lowest level, and the other beads are from upper levels.

A single stemless chipped point of chert came from the upper levels. Two other stemless chipped points from Cerro Narrío are in the Jijón Collection. Chipped projectile points appear to be rare throughout Ecuador (cf. von Buchwald, 1909, p. 156; Markham, 1864, p. 57; Uhle, 1889, pl. 20, figs. 13, 18; Verneau and Rivet, 1912, pl. 6, fig. 11).

Two small limestone figurines came from intermediate levels. These are similar in form to numerous figurines of spondylus shell which have been found at Cerro Narrío (Uhle, 1922c, figs. 133-135; Jijón Collection).

A polished celt of amphibole schist and a fragment of a ground and perforated ax of basalt came from upper levels. Two spindle

whorls, one of slate and one of talc schist, also came from upper levels. Two ground slate knives were found, one in a lower level and one in an intermediate level.

Three fragments of carved ornaments similar to a large number from Cerro Narrío in the Jijón Collection were found. Uhle (1922c, fig. 114) illustrates similar ones from the Cuenca region. One of slate was found on the surface; one of slate and one of calcite came from lower levels.

Two sandstone pottery-smoothers came from lower levels.

A serpentine *estolica* (atlatl spur) came from an upper level. Similar spurs from the Cañar and Cuenca regions are illustrated by Verneau and Rivet (1912, pl. 11).

#### OBJECTS OF BONE

Most numerous at Cerro Narrío were bone tools (Pl. 48). Bone awls were found throughout the different levels (Pl. 48, Fig. 1). They are usually made of long bones of deer. Those from the upper levels, though slightly more numerous, are cruder.

Needles (4) were rare and limited to the upper levels (Pl. 48, Fig. 2). They are long and highly polished. Bodkins (3) are also restricted to upper levels (Pl. 48, Fig. 3).<sup>1</sup> A spatula of fine quality came from an upper level. A small, highly polished rod of unknown use came from an upper level. A notched spatula, which may have been used as a rasp, was similarly found.

Whistles were also from upper strata. One was made from a bird bone. Two bone rings made of sections of deer long bones came from about the same stratigraphic position. Three small flat fragments of worked scapula were found in various levels.

There were also many miscellaneous objects made of antler. There were ten worked antlers from lower levels, belonging to the white-tailed deer (*Odocoileus*). In the upper levels some of the antlers are those of the brocket deer (*Mazama*) and are better smoothed than the preceding ones.

In the lower levels, bones of white-tailed deer and rabbit (*Sylvilagus*) are frequently found. In the upper levels, besides the brocket deer, the llama appears to have been known.

In upper levels were found two fragments of carbonized sting-ray spines. These appear to be from the fresh-water ray of the

<sup>1</sup> Similar perforated bone implements are used by modern Ecuadorean Indians for corn-husking. The hole is for a wrist-cord.

Amazon, but it is impossible to be certain that they are not from a marine species of the Ecuadorean coast. Wallace (1853, p. 486) observed war-arrows tipped with sting-ray spines among the tribes of the Rio Uaupés (northwest Amazon). The spines were dipped in poison, and the foreshafts notched in several places so as to break off in the wound. Roth (1924, p. 155) reports a similar practice on the upper Orinoco. We cannot assert positively that the spines from Cerro Narrío were used as projectile points, although the scarcity of stone and bone points makes such an assumption plausible. Thus these spines may offer a further suggestion of Amazonian influence in the highland of southern Ecuador.

#### OBJECTS OF SHELL

Private collections are full of shell figurines from Narrío (Pl. 49). They apparently come from the lower levels, though evidence on that point is not conclusive. Uhle lists them as a "Mayoid" trait. They have been identified as marine shells, probably spondylus.

Different shells have also been used as ornaments such as pendants, beads, etc. Thus one perforated *Marginella curtus*, one spondylus bead, and several doubly perforated pendants of fresh-water clam shell were found. Most of these came from lower levels.

Two worked fragments of fossilized marine shell were found in lower levels and another unworked *Polycapod* fragment came from the same horizon. The lower levels also showed considerable use of spondylus shells, probably *Spondylus crassissquama*.

Very frequently in the lower levels we found unworked large land snail shells, *Straphocheilus*, species probably *popelainianus*. One of the shells had an engraved design. Another had been worked and was probably used as a pottery-smoother. A different land snail, *Thaumastus thompsoni*, is very frequent in graves of the later horizon. Both snails are edible, similar species being eaten in Brazil today.

#### OBJECTS OF METAL

The minor "Klondike" of 1922 started when gold objects were found on Cerro Narrío. According to Uhle, there was not much gold to be had. Our investigation brought none to light, and most of that which was dug up earlier has been lost.

Uhle mentions that gold bells, pendants, pins, nose-plugs and ear-plugs were turned up during his stay at Narrío. In Mr. Konanz' collection in Guayaquil we saw several ornamental gold pieces from the same hill (Pl. 50, Figs. 1-4, and 12).



Copper and gilded copper are apparently more frequent in the late horizon. We found a copper ax, typical of the area, and in Sr. Jijón y Caamaño's collection there is a large number of such metal artifacts from this site (Pl. 50, Figs. 5-11, and 15). Our copper ax came from an upper level (Pl. 50, Fig. 13).

#### OBJECTS OF CLAY

Clay artifacts (Pl. 51) were relatively numerous at Cerro Narrío. A fragment of a pottery figurine, consisting of the feet and lower body, came from Trench 6. Two similar figurines from Azuay are illustrated by Verneau and Rivet (1922, pl. 44, Nos. 5 and 11), and another from Chimborazo is illustrated by Sr. Jijón (1927, vol. 2, pl. 122, No. 2) as of late Puruhá (Huavalac) type.

A small clay object whose form is similar to an eared ax (Verneau and Rivet, 1912, pl. 4) was found in a lower level. It also resembles a small quartz object from Gualaceo, Azuay (Verneau and Rivet, 1912, pl. 12, No. 32).

Nineteen pottery-smoothers of clay were found. These are all made from sherds. Eleven came from upper levels and ten from lower levels.

Twenty pottery spindle whorls were recovered, seventeen from upper levels and six from lower levels. All are made from sherds.

Pottery seats or drums have been described on page 56.

Uhle (1923a, p. 91; pl. 3, fig. 15) reports a set of pottery panpipes as coming from Cerro Narrío.

#### HOUSES

The nature of Cerro Narrío—a pitted, virtually demolished site—and the short time of our stay there, prevented our making extensive excavations that would have shed light on Narrío houses.

We have only a faint idea as to what the Early Narrío houses were like. In Trench 1, postholes sunk in the hardpan were found (Fig. 4), still containing some of the original wood. They seemed to form a round or oval pattern, which we were unable to investigate further because of the depth of the trench at that point and the accompanying overburden. This structure was cut into by another line of postholes, apparently straight. If the houses were ellipsoid in this early time, as they were later, there is no contradiction between the two forms found in Trench 1.

In the hardpan just outside the oval structure we found a trash-pit full of the usual household refuse. Another pit sunk

into the hardpan showed no sign of refuse. It may have been a storage pit.

Similarly, in Trench 4, five postholes were found sunk into the hardpan, but closer investigation was again impracticable. These holes ran in a line parallel to the terrace where the trench was located.

In the upper levels of Trench 4 were found the remains of a posthole structure. The tops of the postholes were hit in the rich fill 60 cm. from the surface. No floor was discernible at this level. In form, the structure was rectangular, with a curved wall on the inner side of the terrace and rounded ends, the long dimension running parallel to the terrace into which Trench 4 was cut (Fig. 7). The postholes were from 5 to 10 cm. in diameter, with the exception of some larger ones in the center and on the outer side of the house. Many of the postholes contained remains of wood. Twenty-five centimeters below the tops of the postholes were sections of well-packed floor, although these did not extend over the whole structure. The postholes extended 15-25 cm. below this floor. Above the floor was a great deal of ash, and evidence of charred *paja* (*paramo* grass). Cut into the floor on the inner side of the house was a stone-lined hearth pit full of ashes. The entrance was probably on the north-east side facing the outward edge of the terrace. This house, because of its upper stratigraphic position and the Late pottery associated with it (Narrío Gross and late northern intrusive wares), is definitely late in time. It is unfortunate that we do not know enough about the posthole structure in the bottom of this trench to determine whether it was similar to or different from the upper structure.

In Trench 3, on the same terrace as Trench 4, there was a posthole structure (Fig. 6) at the same level as the Late house in Trench 4. The form of this structure is not very clear, but it appears to be circular or square. Most of the postholes are smaller than those in Trench 4, and they are more irregularly placed.

In Trench 6, which was late in occupancy, we found two superimposed house structures. The lower and earlier post structure, found at a depth of about 1.60 meters (Fig. 9), shows a straight wall and the turning of a corner. A larger posthole, with abundant remains of wood still in it, was found just inside the structure and probably belonged to a roof-supporting pole. It was impossible to follow this structure out as treasure hunters' pits had destroyed the evidence at each end. The house floor inside the structure was full of ash and carbonized organic matter.

The later occupancy at this site used the structure shown in Figure 8. The stones do not form a wall, but a mere outline in single stones of a rectangular room. This room was part of a multicameral structure of which we could see some evidence, and the presence of which was recalled by the local treasure hunters. Parts of the east and the south wall are duplicated by a line of postholes appearing immediately beneath the stones. They are larger than the holes of the lower structure and more crumbly, being sunk into refuse instead of hardpan. We presume that the walls of the structure were made of poles, reinforced at the bottom with a few stones. This supposition is not certain because such postholes could not be found in the west wall, although a large and deep hole was found just inside the west wall of the house. This hole is quite similar to the large posthole found in the earlier house and probably served similar supporting purposes. The houses at Trench 6, particularly the upper one, were quite rich in intrusive sherds, characterized on pages 56-66. While both were quite late, they help to distinguish between different intrusive periods, the lower house having only Engraved sherds as intrusive, while the upper one was rich in Puruhá and Tuncahuán ceramics.

Although the problem of Narrío dwellings is one of considerable interest, it is impossible at the present time to make more detailed statements. However, we are able to deny Uhle's assertion (1922c, p. 208) that large stone walls, made of small, flat stones, are to be found at Narrío. There is no equivalent there of the Cerro Llaver structures that are shown in the same publication (pl. 2).

#### BURIALS

There was no special attempt made by the expedition to locate a large number of burials. We concentrated on stratigraphic excavation and therefore opened only five graves in Trench 1 and four more in Trenches 3 and 4. They all belonged to the Late period, and had no grave goods beyond a few snail shells. A Late burial consisted of a pit about 1.5 meters deep and 60 to 80 cm. wide, into which the body was lowered in a flexed position, apparently sitting up. The entrance to the grave was then covered with a pile of boulders, which today give much help to the eager treasure hunter, who locates them by testing the ground with his large probe. Numerous such graves were found on the western slope of the hill during the 1922 "gold rush."

We were unable to locate any burials of the Early period. According to Uhle (1931, p. 36, footnote 2) the cemeteries were located

on the southwest side of the hill. Trenches 15 and 16 dug on that promontory failed to locate any graves. Their presence was also denied by the treasure hunters.

### III. OTHER SITES IN THE CAÑAR VALLEY

In order to check and augment the information from Cerro Narrío, three other sites in the Cañar Valley were investigated. A surface sherd collection was made at Quillohuac, and test pits were dug at Shillu and Cashaloma.

Quillohuac (Map 2), which we named after the nearby Indian settlement, lies 700 meters southwest by south of Cerro Narrío

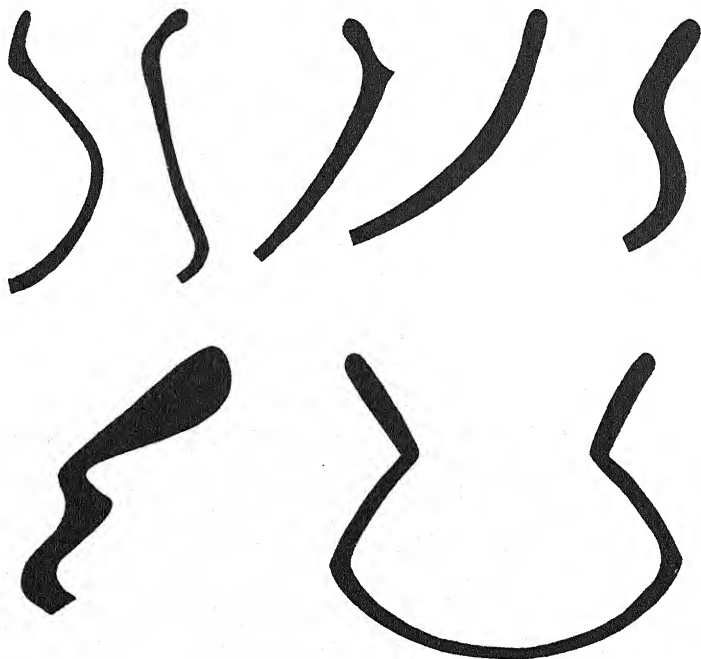


FIG. 15. Narrío Red-on-Buff rim forms at Shillu. Compare with Late forms of Narrío Red-on-Buff at Cerro Narrío (Fig. 10). Scale 1:1.8.

on a flat knoll on the ridge which runs along the west side of the Rio Quillohuac.<sup>1</sup> The ground is covered with sherds, but there are no surface indications of structures. The 209 sherds collected were predominantly Narrío Red-on-Buff and Narrío Gross. There were a few Narrío Red-on-Buff Fine sherds, five Glossy Red Engraved sherds, two White-on-Red sherds, and two sherds from a bowl of the Glossy Red Negative type.

<sup>1</sup> Uhle (1931, p. 36, footnote 2) calls it the Rio Zhamzham.

Shillu (Map 2) is about 200 meters above the valley floor on the summit of a ridge 1.7 km. northwest of Cerro Narrío. The flat top of the ridge and the southeast slope have an abundance of surface sherds, and the whole area has been very extensively pitted and trenched by treasure hunters. In many places the hardpan comes within 50 cm. of the surface; the areas of deeper deposits have been pretty thoroughly disturbed, and there is evidence that many burials have been removed. According to local treasure hunters, very little gold has been found at Shillu.

After considerable search for undisturbed areas, four test pits 1 by 0.5 meters were cut down in 15 cm. levels. In two of these, hardpan was reached at 90 and 105 cm., respectively. In the third no sherds were found beyond a depth of 45 cm., and the sherd yield was even poorer in the fourth pit. From these pits 1,396 sherds were recovered. There was no significant variation in sherd distribution from top to bottom, which is not surprising in such a shallow site. The combined sherd yield for all the pits is divided as follows:

	Per cent
Narrío Red-on-Buff.....	68
Narrío Red-on-Buff Fine.....	15
Cañar Polished.....	1
Narrío Gross.....	13
Glossy Red Engraved.....	1
Others.....	2
	<hr/> 100

Included in "others" are a few Red Engraved, Black Engraved, and Red Banded Incised sherds, and fragments of two pottery seats. Three Quartz-Studded sherds and one White-on-Red sherd were found on the surface. Frequent forms in Narrío Red-on-Buff are bowls, wide-mouthed jars with flaring bottoms (Fig. 15; Pl. 16, Fig. 9), and compoteras with bottom of inside decorated with red lines and dots.

No burials were uncovered, nor was any evidence of structures encountered.

Cashaloma (Map 2) lies on a low hill 2.5 km. north of Cañar and 200 meters west of the Cañar-Tambo road. Plowing and the activities of treasure hunters have brought to the surface a large number of sherds. There is no surface evidence of structures. Five test pits one meter square were excavated in different parts of the site. The pits were cut down in 15 cm. levels until hardpan was reached. The depth of the different pits was as follows:



	cm.
Pit 1.....	75
Pit 2.....	75
Pit 3.....	90
Pit 4.....	165
Pit 5.....	45

In Pit 1 an ash pit and two postholes were found in level 4, and there was a burial at the bottom of the pit. The skeleton was an adult male tightly flexed and sitting upright. The burial pit extended from a depth of 40 cm. to the hardpan and was excavated 15 cm. into the hardpan. No artifacts were associated with the burial. In Pit 4 the first level was 30 cm. thick, reaching down to the plow line. The remaining nine levels were 15 cm. thick. In level 6 three small, shallow postholes in line were encountered. Fragments of a Red-on-Buff jar were found in level 6. In level 7 were found fragments of a well-polished Red-on-Buff tripod jar with *hoja de cabuya* legs (Pl. 52, Fig. 4), and beneath it an infant burial. In level 8 were fragments of two Red-on-Buff jars (Pl. 52, Figs. 1-2).

A total of 2,495 sherds was recovered from the five pits at Cashaloma. This was divided into the following types:

	Per cent
Gross.....	62
Red-on-Buff.....	26
Red-on-Buff Fine.....	1
Others.....	11

There are no significant changes in the distribution by level, except that sherds showing Incaic influence are more frequent in the upper levels.

The Gross at Cashaloma appears to be closely related to Narrío Gross, but certain differences are apparent. In the former, the proportion of slipped and polished sherds is higher. At Cashaloma 23 per cent of Gross sherds are slipped and 31 per cent are slipped and polished, while the corresponding percentages for Narrío Gross are 18 and 10. The polishing referred to is not a high polish and has little luster. The red on the Gross sherds at Cashaloma is much less constant than at Narrío, varying from purple-red through red to orange. The common Gross forms at Cashaloma are jars with flaring rims, tripod vessels with *hoja de cabuya* legs, compoteras, and shallow bowls, the latter being more frequent than at Narrío.

The Red-on-Buff at Cashaloma is related to Narrío Red-on-Buff, but differs from it somewhat. In general, the walls and particularly

the rims of vessels are less well smoothed than at Narrío. Fairly frequent are vessels on which the red slip has been applied to the outside walls, as well as to the rim, in contrast with Narrío. These vessels usually have carelessly made, irregular line luster over the whole slipped surface. The predominant forms are globular jars with flaring rims and elongated jars with flaring rims and lugs just below the neck. In level 1 we encountered several typical Late Narrío Red-on-Buff compoteras decorated on the inside with red dots, circles, and hooks.

The few Narrío Red-on-Buff Fine sherds found at Cashaloma were in no way different from those of Cerro Narrío.

The sherds listed above as "others" include two Red Engraved sherds, four Black Engraved sherds, one Glossy Red Engraved sherd and one Gray Engraved sherd, as well as a number of types which we believe to exhibit Incaic influence. The latter are as follows:

- (a) Large, thick, rough jars with flaring rims and with pronounced shoulder ridges which may be notched. The surface is unpolished and bears a white slip from rim to shoulder (Pl. 53, Figs. 1-3, 7-9; Pl. 54, Figs. 1-2, 5-6). Within the slipped area are reed punctates within incised triangles, small, multiple reed punctates in groups of two, or triangular punctates in groups of three. Occasionally there are unpolished red bands bordering the incised areas. Sometimes incised rectangles alternately hatched, giving a checkerboard effect, are placed on the unslipped surface below the shoulder. Below the shoulder are placed vertical handles which are decorated with reed punctates and small lugs. This type is found largely in the upper levels. It definitely shows Incaic influence, and has been found in association with Incaic wares farther north at Joyacachi (Jijón Collection).
- (b) Jars with brush marks cutting through white slip (Pl. 53, Figs. 4-6). This type, found in the upper levels, is probably related to type *a*.
- (c) Horizontal lugs with parallel incisions appear Incaic (Pl. 53, Figs. 10-12).
- (d) Polished white-on-red bowls, and plates with rim lugs (Pl. 53, Figs. 14-17). This type is found in the upper three levels.
- (e) White-on-red bowls and bottles with tall necks and flaring rims (Pl. 52, Fig. 6; Pl. 54, Figs. 3-4, and 7). Bowls with incurved walls have white bands around the outside of the

rim with red below, while bowls with outcurved walls have red bands with occasional white dots around the outside of the rim with white below. Some of these bowls are polished. The bottles have alternating bands or areas of white and red, with red or white flaring rims. Some of the red rims bear white dots and crosses (Pl. 53, Figs. 13 and 18). These are similar to decorations found by Uhle at Tomebamba (cf. Uhle, 1923c, pl. 5, fig. 19 [9]). Another white-on-red decoration is characteristic of compoteras with perforated feet (Pl. 52, Fig. 5; Pl. 53, Figs. 20-21). On the outside of the rim is a red or orange band on which are one or two horizontal rows of white dots. The base of the foot is red and bears a horizontal row of white circles bordered above and below by lines of white dots. Fragments of certain other bowls and vessels bearing white and red ornamentation may be Incaic, but their number and size are insufficient to say anything positive about them.

One White-on-Red and one Quartz-Studded sherd were found on the surface.

#### IV. PREHISTORY OF CAÑAR VALLEY

The cultural remains found at Cerro Narrío fall into two distinct groups with respect to their stratigraphic positions. While the two groups are clearly differentiated, there is at the same time a con-

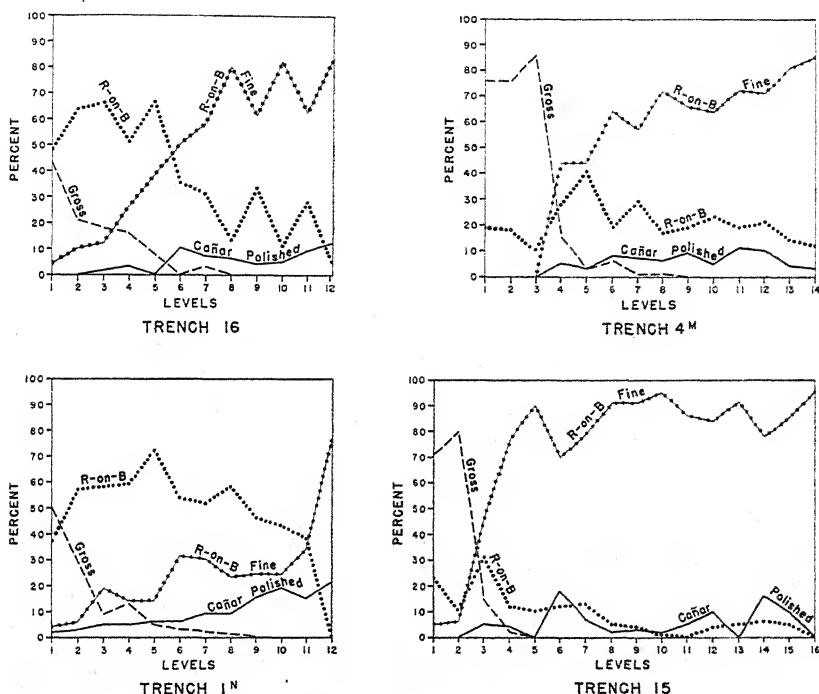


FIG. 16. Percentage distribution by trench level of Cerro Narrío wares. These graphs are based on the tables in Appendix B. For the sake of readability only the curves for the four basic wares at Cerro Narrío (Narrio Red-on-Buff, Narrio Red-on-Buff Fine, Cañar Polished, and Narrio Gross) are shown. Note that the critical point at which the rising curve of Narrio Red-on-Buff Fine intersects the falling curve of Narrio Gross in each case falls between levels 3 and 4. Narrio Red-on-Buff reaches its maximum at about the same point and thereafter decreases, while Cañar Polished is at its maximum near the bottom of each trench and fades out near the critical point. This critical point may be taken as the division between the Early and Late periods.

tinuity from early to late, which makes us feel that only one people has occupied this area and that the changes described are due to the normal cultural development of an aboriginal group. Thus, Narrio Red-on-Buff ceramics are found throughout the different trench levels, and while certain new forms and decorative motifs

appear in this ware in later times, the basic ceramic component remains virtually unchanged.

We have given the names of Early and Late Cerro Nariño to the two complexes found on that hill. There is no doubt of their temporal relationship. While the Late period is not isolated by a sterile layer from the Early one, it is made up of ceramic forms,

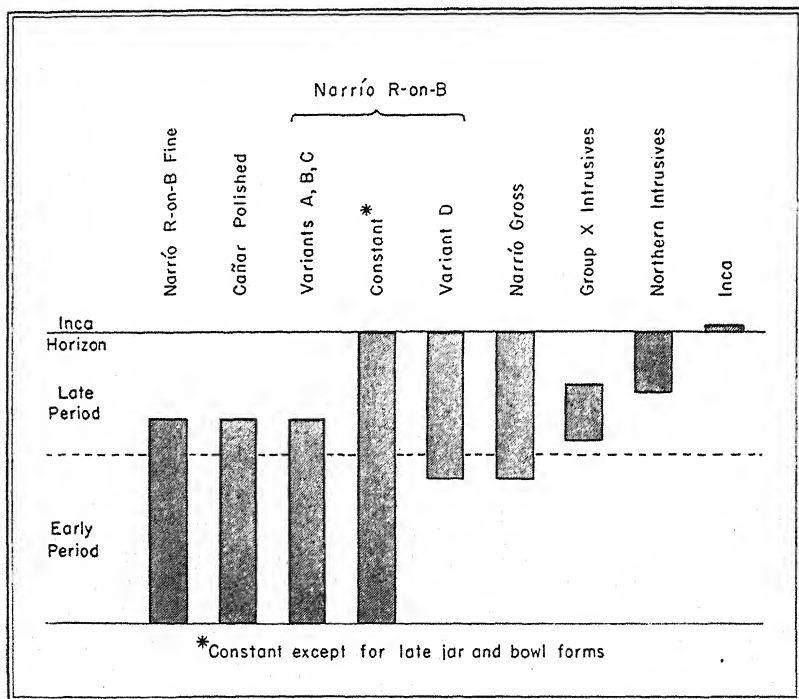


FIG. 17. Schematic representation of Nariño ceramic chronology.

artifacts and other cultural evidence of peculiar cast which were found consistently in the sixteen trenches, where the two horizons are clearly stratified. The stratigraphic relationships of the Early and Late ceramic types are shown in Figures 16 and 17 (cf. also Appendix B). It was not a sudden invasion or a break-up of the old culture that we are witnessing in the valley, but rather a gradual change of the culture patterns. Ceramic forms grew rougher, there was less evidence of contact with the sea, metals appeared, there was contact and probably trade with at least two new and different cultural centers. At the end of the Late period it appears that the Inca conquest terminated the occupation of Cerro Nariño.

Below are listed the known cultural traits comprising the Early and Late complexes at Cerro Narrío. Revision and particularly amplification of the Early complex will obviously be needed before the prehistory of this area can be clearly understood.

#### EARLY COMPLEX

##### *Ceramics*

Narrío Red-on-Buff (pp. 46-49).

Variants A, B and C (pp. 49-50).

Narrío Red-on-Buff Fine (pp. 50-52).

Cañar Polished (pp. 53-54).

Granulated ware (p. 54).

Anthropomorphic designs; depression with appliqué clay pellet for eye.

##### *Artifacts*

Stone (pp. 67-68).

Ground knives, pottery-smoothers, beads, flat carved pendants, figurines.

Bone (pp. 68-69).

Awls of deer long bones, worked deer scapulae, use of deer antler for tools (presence of deer and rabbit bones indicates use of these animals for food; no evidence found of llama or guinea pig).

Shell (p. 69).

Pendants and beads of marine and fresh-water shells, probably spondylus shell figurines, large land-snail shells with engraved spiral design, possible use of land snails for food.

Clay (p. 70).

Pottery-smoothers and spindle whorls made from sherds, one miniature ax head of clay found.

Metal

No evidence of use of metal; probably little used.

*Houses* (pp. 70-72).

Vertical pole structures of undetermined shape.

*Burials*

No evidence found.

*Agriculture*

Maize; probably other crops, though no direct evidence found.

#### LATE COMPLEX

##### *Ceramics*

Narrío Red-on-Buff, continued (pp. 46-49).

Variant D.

Narrío Gross (pp. 54-56).

"Coffee-bean" eye.

Intrusive.

Group X (pp. 58-62).

Red Engraved.

Black Engraved.

Glossy Red Engraved.



Quartz-Studded.

Red Banded Incised.

Northern group (pp. 62-66).

Puruhá (San Sebastián, Elen Pata, Huavalac).

Tuncahuán.

Variants A, B, C, D, E and F.

#### *Artifacts*

Stone (pp. 67-68).

One chipped projectile point, celts, perforated ax heads, spindle whorls, atlatl spurs, beads.

Bone (pp. 68-69).

Awls, needles, bodkins, spatula, small polished rods, notched sticks, whistles, rings, fragments of worked scapulae, brocket deer antler points, sting-ray spines, use of llama and deer.

Shell (p. 69).

No shell artifacts (apparent decrease of contacts with sea).

Land snail shells used as grave goods.

Clay (p. 70).

Flat gross figurines, vessel fragments used as pottery-smoothers and as spindle whorls. Drums or seats.

Metal (pp. 69-70).

Copper axes and topus. Gold ornaments and gilded copper apparently introduced in this period.

#### *Houses* (pp. 70-72).

Pole houses, ellipsoid or rectangular in form, with thatched roofs of coarse grass. In very late times and possibly only for special purposes house poles were reinforced with stones.

#### *Burials* (pp. 72-73).

Flexed, apparently sitting. Covered with boulders.

Grave goods frequent; include artifacts, ornaments, land snail shells.

#### *Agriculture*

Maize and other crops (?; no evidence found); manioc imported (?).

The picture presented above is confirmed by additional survey and excavation at Quillohuac, Shillu and Cashaloma.

Shillu, through its lack of Red-on-Buff Fine pottery and because of the presence of Red-on-Buff Late forms and of intrusive wares of Group X, can be dated as Late Cerro Narrío. The absence of intrusive Northern wares is in accord with the physical evidence of shallow, short occupation. It confirms the evidence that the two different outside influences during Late Cerro Narrío came at different times, with only the earlier affecting the people of Shillu.

Cashaloma, while basically of Cerro Narrío type, is considerably later than Shillu. The dominant outside influence here is the Incaic, reflected both by typical Cuzco forms and native vessels showing the southern empire's influence. Thereby the sequence

established at Narrío is extended into the fifteenth century, confirming simultaneously the possibility of Incaic influences at Narrío proper, which were none too certain. The temporal relations of the sites in Cañar Valley are shown in Figure 18.

Early Cerro Narrío ties up with the different "Mayoid" sites in Azuay listed by Uhle (1922c, pp. 206-207), of which Chaullabamba, Carmen and Huancarcuchu seem the most important.<sup>1</sup> In this article he unfortunately discusses pottery and artifacts without

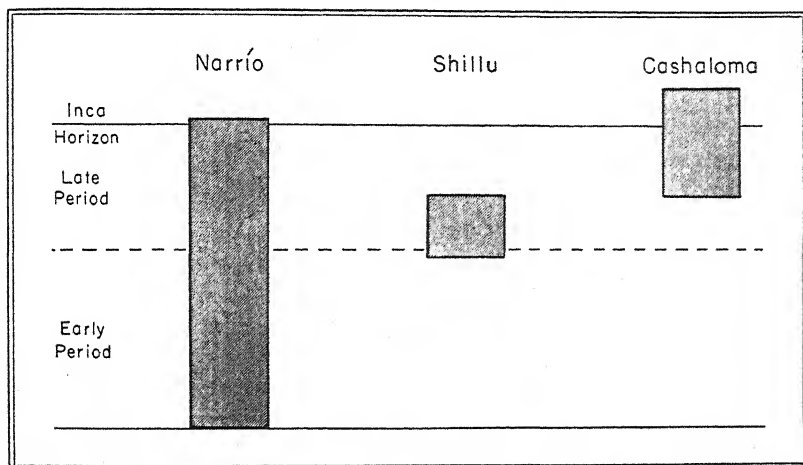


FIG. 18. Chronological positions of sites in Cañar Valley.

regard for provenience. It is impossible to tell where the majority of forms came from. But it is clear that these sites share Narrío Red-on-Buff and Red-on-Buff Fine pottery, line luster and bulbous decoration, and some forms of Cañar Polished, as well as certain characteristic shell and stone figurines and ornaments.

Some of the unique sherds from Early levels at Cerro Narrío (Pls. 42-43) show similarities to coastal forms, but the latter are still insufficiently known for definite commitment.

In later times, the associations to the south become less marked. It is very possible that similarity will become apparent when a stratigraphic excavation is undertaken, with due attention to statistical frequencies. There is little in common between Late Cerro Narrío and the more spectacular forms discussed in the Survey (p. 28) as being late on the headwaters of the Santiago in Azuay.

<sup>1</sup> Uhle has proposed the term "Mayoid" for the Early Cerro Narrío complex (1922c, 1928b, 1935), while Jijón (1930) prefers to call it Chaullabamba.

To the north, the earliest influence within the Late period at Narrío (Group X) has also affected the Chanchan and Upano valleys. This influence, reflected at Alausí through Engraved, Red Banded Incised, Quartz-Studded and White-on-Red wares and at Macas through the latter three only, has not yet been traced to its focal point. The evidence is clear that Group X is just as much intrusive at Alausí as it is at Narrío, and this is probably true at Macas also. The group does not seem to be found in the northern highlands, which are fairly well known. Because of resemblance to Quartz-Studded vessels from Huigra and Esmeraldas and black engraved pottery from Manabí, Group X may have come from the coast. The geographic position of Macas suggests the Oriente jungles as another possible point of origin. The evidence seems to favor most the coastal side, but an adequate answer will require additional investigation.

Shortly after Group X, Puruhá influences began to be felt at Narrío. This wave connects not only three diverse Puruhá periods (San Sebastián or Guano, Elen Pata and Huavalac) but also allegedly earlier Tuncahuán levels with the latest occupation at Cerro Narrío. While not very strong, this influence cross-dates the Cañar Valley with aboriginal cultures of the Chimborazo Province and tends to alter the succession proposed for them (Jijón, 1927, 1930) by telescoping several periods.

Finally, this late dating of some northern forms is confirmed by finds made at Joyaczhí, high up in the Nudo del Azuay. There several variants of Tuncahuán (Jijón, 1930, pl. 25) are found along with sherds decorated with Incaic-influenced Cashaloma reed-punctates (Jijón Collection). There seems little doubt that in the period just preceding the Inca conquest the Puruhá people were increasing their sphere of influence to the south.

In the Late period, as in the Early levels, contacts with the littoral are hinted at by the presence of a few intrusive sherds of coastal cast, but the data are insufficient for a definite statement.

There remains the problem of identification of the different periods discussed above with aboriginal tribes inhabiting the area in historic times. There seems to be little doubt that the Cañari people lived on the upper reaches of the Naranjal before, during and after the Incaic conquest. Incaic artifacts and evidence of Incaic influences are found in direct association with a Late Cerro Narrío complex at Cashaloma and probably at Narrío. As no other ethnic group besides the Cañari has been reported for the area, we are bound

to conclude that Cerro Narrío ceramics and artifacts were manufactured and used by Cañari Indians. If this be true, Early Cerro Narrío represents the cultural equipment with which the Cañaris moved into the area. Where they came from is unknown at present. Even discounting Uhle's Totonac-Chorotegan-Panamanean hypothesis (1931), it is still logically possible that the group represented by our pottery came from the Ecuador coast, although there is no evidence to prove this. They spread through the provinces of Azuay and Cañar, the different units eventually pursuing their individual lines of development in comparative isolation. From the survey evidence it seems that the area around Cuenca and the upper reaches of Rio Santiago was a center of Cañari development from the early Cerro Narrío or Chaullabamba base. As stated in the Survey (p. 27), this later development, consistent in itself, differs from a chronologically similar horizon across the range in the Cañar Valley. Isolation of the two areas from each other, and diverse outside contacts, with southern and perhaps eastern influences in Azuay, would account for this diversification. Thus, the late differences between Cañar and Azuay are not necessarily an argument against our tentative equation of Early and Late Cerro Narrío with the Cañari Indians.

## V. CONCLUSIONS

Our survey and excavations in southern Ecuador have produced the following results. We have established a stratigraphic chronology for the Cañar Valley. At its upper end this chronology is tied in with the Inca horizon, thus giving it a terminal date of 1450-1500. The early part of the chronology can be extended into the Province of Azuay to the south on the basis of similar ceramics found there, and through the presence of intrusive wares it is possible to relate the Cañar sequence to the aboriginal remains in Chimborazo, the next province to the north. We are unable to see in Cañar ceramics the close resemblances to Central America which have been emphasized by Uhle and Jijón, and which first attracted us to Cerro Narrío. Rather, we are inclined to identify the Cañar remains with the Cañari Indians, who are known to have occupied the region at the time of the Inca conquest. Although vessels of apparent north Peruvian coastal provenience occur sporadically in southern Ecuador, Peruvian influence is not evident in the local ceramics.

The Cañar Valley chronology consists of an early period (Early Cerro Narrío), a late period (Late Cerro Narrío), and a final Inca horizon. The Early and Late period complexes are described in full in Chapter IV. The Early and Late periods were found clearly stratified in the deep refuse deposits at Cerro Narrío. There was no clear break between the two periods but a transition in which early wares faded out and new ones appeared. A basic ware lasted throughout the occupation of Cerro Narrío, showing only minor changes in form and decoration. There is therefore reason to believe that the two periods represent not separate occupations of the hill but the developing culture of a single people, who probably were the Cañari Indians.

Intrusive in the Late period at Cerro Narrío were found two groups of ceramics. The first (Group X), which we believe to be slightly earlier in time at Cerro Narrío than the second, includes Black Engraved, Red Engraved, Glossy Red Engraved, Quartz-Studded, and Red Banded Incised, as well as White-on-Red. These wares were found consistently in a horizon near the beginning of the Late period. The second and later group includes Puruhá wares, typical of the Province of Chimborazo to the north, and Tuncahuán wares, found in Chimborazo and still farther north, all of which were found closely associated in the latest horizon of occupation at the summit of Cerro Narrío. In these intrusive Puruhá wares we

have identified types which Sr. Jijón has placed in three separate periods, namely, San Sebastián, Elen Pata and Huavalac.

That these two intrusive ceramic groups were not contemporaneous was confirmed by our excavations at Shillu. This was a shallow site containing Cerro Narrío wares of Late type associated with Group X intrusives; no Puruhá-Tuncahuán intrusives were found.

Some Incaic and Inca-influenced vessels have been reported from Cerro Narrío, but we found no clear Inca horizon there. However, at Cashaloma, a site of Late Cerro Narrío period, definite and ample evidence of Inca influence was found in the upper levels.

To sum up the situation in the Cañar Valley, at Cerro Narrío we have represented an early and a late period, with two groups of northern intrusives in the Late period, and scanty evidence of Inca influence. At Shillu we have a pure Late period site with Group X intrusives only. Cashaloma is a Late period site showing definite Inca influence toward the end of its occupation.

Early Cerro Narrío wares have been reported by Uhle for several sites in the Province of Azuay to the south of Cañar, and their presence at Sumay Pamba on the Jubones extends the distribution to the northern edge of the Province of Loja.

The presence of Late Cerro Narrío wares in Azuay has not been established, although future stratigraphic excavation may well reveal them there. The Late Cerro Narrío sherds at Sumay Pamba make it likely that this period is represented farther north in Azuay also. Certain non-Narrío and presumably late ceramic types in collections from Azuay suggest the possibility that in Azuay in the Late period ceramic development followed a different line from that in the Cañar Valley.

Group X intrusives are present at Alausí on the western slope in Chimborazo, and at Macas at the eastern foot of the Andes. Group X thus came to the Cañar Valley from the north. Too little is known as yet to determine the focus of this influence, and it may ultimately prove to have come either from the coast or the jungle. The former is the more probable place of origin.

We found late Puruhá pottery at Zula on the upper Chambo and at Alausí. These places are within the area of extension of Puruhá already suggested by Sr. Jijón.

South of the Rio Jubones in Saraguro our survey revealed no evidence of Cerro Narrío pottery or of other wares typical of Azuay. Saraguro wares are crude and utilitarian, and at present cannot



be tied up with surrounding areas. There is evidence of an Inca horizon here.

Local painted wares were found in the Catamayo Valley west of Loja. These do not affiliate to the north, nor can we at present see much resemblance to known Peruvian types, although more knowledge of the Peruvian highland and coast immediately to the south may make evident some sort of tie-up. Large stone enclosures in the Catamayo Valley are similar to ones on the Jubones reported by Verneau and Uhle as being Incaic. In the former place we found no Incaic sherds. These structures are somewhat suggestive of late stone enclosures on the coast of Peru (e.g., in the Casma Valley).

The problem of Central American connections remains unsolved. Southern Ecuador is the area showing clearest Mayoid, Chorotegan and Panamanean connections of any of the Andean cultures, according to Uhle. We are convinced that these direct connections are not realities and that the concrete similarities, when graphically presented, cannot be confirmed.

The difficulty seems to lie in the fact that in all of his comparative work Uhle uses the isolated trait as the comparable unit. Whenever he does engage in concrete examination of data, which is none too frequently, he tends to extract the unique and favorable fact from its context, consistently ignoring the larger pattern (1923a, 1924, 1931). Also, as Lothrop has pointed out (1940, p. 423), he neglects the chronology which has been developed and improved for Middle America. His only attempt to reconcile the calendar of the Mayas with their supposed migrations consists in criticism of Lehman's correlation (1923b), and in suggestions as to the relative antiquity of Maya and Totonac remains.

On the other hand, Uhle was right in feeling that Tuncahuán influences in Cañar were later than Early Cerro Narrío (his "Mayoid" levels). As has been pointed out, Tuncahuán ceramics are part of the latest outside wave to penetrate the Cañar area, shortly before the Incaic conquest. This would seem to throw some doubt on the feeling of Sr. Jijón (1927, vol. 2, p. 182, footnote 2) that Tuncahuán peoples worked and lived in Chimborazo in the period before A.D. 750. The Puruhá Indians allegedly entered the area shortly afterwards and were still there when the Cuzco legions marched through. The evidence at Cerro Narrío clearly places Tuncahuán and the various Puruhá levels in the same late chronological position.

This evidence does not necessarily contradict the temporal differentiation of the Tuncahuán occupation from that of the

Puruhá in Chimborazo. But it does shrink highland chronology to at most four or five centuries prior to the arrival of the Incas in Ecuador. It supports Means' contention (1931, pp. 157-164) that the different Puruhá periods can be telescoped, although his argument in terms of the "Archaic" style is not acceptable today. The occurrence side by side of Elen Pata ceramics dated 850-1300 by Sr. Jijón with Tuncahuán pottery believed to go back to the beginning of the Christian era, raises legitimate doubts as to the validity of the chronology proposed.

It is only through additional work that the problems confronting Ecuadorean archaeology will be solved. The systematic survey of the country undertaken by Mr. Edwin N. Ferdon, Jr., for the School of American Research is in that respect an excellent project. Although Mr. Ferdon has as yet been unable to work in the southern highland, this area is included in his future program and should yield important results.

The region included in the Azogues-Cuenca-Cumbe-Sigsig-Paute pentagon is the one that demands most immediate survey and excavation. Stratified sites probably exist there, and careful work will check our Cañar chronology as well as extend it. The placing of Tiahuanaco influences, suggested by the Chordeleg gold artifacts, into our Cañari chronology will also be very helpful. Finally, the relation to other Peruvian cultures such as Chavin and Chimú might be cleared up.

The same problem can be fruitfully attacked in Loja, with a survey of the Jubones and the Catamayo-Chira drainages indicated as the most pressing project. The Palta occupation of Loja, whose linguistic affiliations are in the Oriental jungle and whose archaeology is virtually unknown, presents the problem of Amazonic influences in Andean development, variously suggested by Rivet and Lothrop but never archaeologically tested.

To the north, a survey of the Naranjal and Chanchan drainages might shed light on the origin of the Cerro Narrió complex, and clarify Group X and its affiliations.

Finally, the Macas area and if possible the entire Upano Valley should be investigated. The correlation shown there with Alausí and Narrió, through Group X wares, raises again the problem of Amazonic intrusion, already suggested for Loja. Only additional work, however, can remove these relationships from the realm of pure speculation.

We have mentioned certain evidence of outside cultural influence in the highland of southern Ecuador: evidence of contact with the Ecuadorean coast and the Amazonic jungle, of trade with the north coast of Peru in pre-Incaic times, and of possible Tiahuanaco influence in metal objects from Azuay. Despite the hints of contacts with Peru, Peruvian influences in southern Ecuador appear to have been surprisingly slight. In general, we have the impression that Ecuador affiliates more closely with Colombia than with Peru.

Ecuador occupies a strategic position for studying the problem of cultural interchange between the Andean region and Central America. Such traits as certain styles of stone sculpture, methods of constructing tombs, forms of pottery (e.g., tripod vessels), negative painting on pottery, and metallurgical techniques link Ecuador to the south with Peru and to the north with Colombia and Central America. These and other traits held in common by the Andean region and Central America have varying geographical distributions and appear to be of different ages. It is therefore highly improbable that the spread of these traits can be explained satisfactorily in terms of a single cultural wave or a number of closely related cultural waves. It appears at present that the cultural resemblances between South and Central America resulted from diffusion in both directions and over a long period of time.

These general considerations, as well as the fact that we cannot see the very specific resemblances claimed, lead us to disagree with Uhle's and Jijón's theories of direct Maya and Chorotegan influence in Ecuador. Apparently there are no short cuts to the solution of the problem of Central American connections with Andean civilizations. Systematic excavations to establish as fully as possible the patterns of aboriginal life, as well as reliable chronologies, are needed before comparative work can yield decisive results.

APPENDIX A:  
PASTE ANALYSIS OF CERRO NARRIO WARES

BY  
SHARAT K. ROY

*Narrío Red-on-Buff Fine.*—The clay consists of a base or ground mass of microcrystalline micaceous substance, probably montmorillonitic, with a large proportion of pumice particles (temper) showing a moderate degree of rounding. Pale green and brown augite, brown biotite, sodic plagioclase, and quartz grains, make up the rest. Also present are relatively large masses of tuff of lighter color, but otherwise similar character; these may represent an earlier ashfall, which has been washed into the basin of deposition during the settling of the latter. Apparently the clay is obtained from a bed of volcanic débris, not too far from the site of eruption. The recognizable mineral components are quite fresh, and show little alteration by weathering or firing.

*Narrío Red-on-Buff.*—The paste is easily distinguishable from that of *Narrío Red-on-Buff Fine*. The microcrystalline base is finer-grained, and darker, containing much black or dark brown opaque oxide. No pumice fragments are present, but calcic plagioclase (temper) is abundant. Particles of fine-grained rhyolite are also numerous. Quartz, green hornblende, green augite, and red-brown biotite are also present.

*Narrío Gross.*—The paste contains considerable quartz (temper) and is more like *Red-on-Buff* than *Red-on-Buff Fine*.

*Cañar Polished.*—Temper consists of fragments of plagioclase, quartz, rhyolitic ash, green and brown hornblende and augite, red-brown biotite, and some pumice of the type seen in *Narrío Red-on-Buff Fine*. The matrix is similar to that of *Narrío Red-on-Buff*.

Apparently all the samples are of the same general derivation, volcanic débris. *Narrío Red-on-Buff Fine* differs from the others in the abundance of pumice fragments, and paucity of plagioclase. Merely from examination of the sections it cannot be said whether the respective samples represent distinct ashfalls, or merely phases of one fall, the differences being due to natural sedimentation processes, or possibly treatment (washing, etc.) by the potter. Probably more than one fall is indicated.

## APPENDIX B: DISTRIBUTION OF SHERDS BY TRENCH LEVELS AT CERRO NARRIO

In tables 1-5 are shown the percentages for each ware in each level for trenches 1N, 4M, 15, 16 and 6 (inside house).<sup>1</sup> The first four are typical of the trenches dug on the shoulders and lower platforms of Cerro Narrío, while Trench 6 is representative of the trenches dug in the Late deposits on the top platform of the hill. Certain minor types, because of the small number of sherds belonging to them, have been grouped together for convenience. Thus Variants A, B and D of Narrío Red-on-Buff have been included with Narrío Red-on-Buff, the intrusive engraved types have been lumped under one heading, and the Puruhá and Tuncahuán groups are each listed under their respective names.

It should be noted again that we use the term "ware" in a general sense to refer to pottery types and to broader ceramic groupings.

TABLE 1.—DISTRIBUTION BY LEVEL OF SHERDS IN TRENCH 6 (INSIDE HOUSE)

WARES	<i>Percentage of total sherds in level</i>							Total No.
	Lev. 1	Lev. 2	Lev. 3	Lev. 4	Lev. 5	Lev. 6	Lev. 7	
Narrío Red-on-Buff.....	67.7	64.9	42.9	41.0	39.0	65.2	58.9	268
Narrío Red-on-Buff..... (Variant C)								
Narrío Red-on-Buff Fine....	3.2	6.8	3.9	7.7	....	....	7.7	20
Cañar Polished.....	3.2	0.9	....	....	....	....	2.6	3
Granulated.....								
Narrío Gross.....	22.7	24.3	51.4	51.3	58.2	34.8	2.6	224
Engraved.....		1.8	0.6	....	....	....	28.2	14
Puruhá.....	3.2	....	....	....	....	....	....	1
Tuncahuán.....		1.8	0.6	....	2.8	....	....	7
Others.....			0.6	....	....	....	....	1
<i>Total number of sherds</i>								
All wares.....	31	111	154	39	141	23	39	538

<sup>1</sup> The dimensions of these trenches are as follows: 1N is 2 by 3.3 meters, and 1.8 meters deep; 4M is 2 by 4 meters, and 2.5 meters deep; 6 (inside house) is approximately 3 by 6 meters, and 1.6 meters deep; 15 is 1 by 1 meter, and 2.6 meters deep; 16 is 1 by 1 meter, and 2.10 meters deep.

TABLE 2.—DISTRIBUTION BY LEVEL OF SHERDS IN TRENCH 1N

WARES	Percentage of total sherds in level												Total No.
	Lev. 1	Lev. 2	Lev. 3	Lev. 4	Lev. 5	Lev. 6	Lev. 7	Lev. 8	Lev. 9	Lev. 10	Lev. 11	Lev. 12	
Narrío Red-on-Buff.....	37.9	57.1	58.2	59.3	72.1	54.5	51.5	58.0	46.6	43.2	38.8	.....	1882
Narrío Red-on-Buff (Variant C).....	.....	0.7	0.4	.....	.....	.....	0.4	1.1	0.3	1.2	0.3	.....	17
Narrío Red-on-Buff Fine.....	4.7	6.0	19.8	14.9	14.5	31.2	29.6	22.9	24.3	24.4	34.0	76.0	803
Cañar Polished.....	2.9	3.8	5.8	5.2	5.3	5.9	9.3	8.9	14.5	18.9	14.7	20.9	324
Granulated.....	1.1	1.5	0.4	.....	0.8	3.6	5.8	8.0	12.2	11.1	10.7	1.0	176
Narrío Gross.....	50.7	29.7	8.9	13.7	5.9	3.6	2.4	1.1	1.4	0.4	1.5	.....	479
Engraved.....	.....	0.4	5.8	4.9	1.1	.....	.....	.....	.....	.....	.....	.....	37
Puruhá.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tunachuan.....	2.0	0.4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	12
Others.....	0.7	0.4	0.7	2.0	0.3	1.2	1.0	.....	0.7	0.8	.....	2.1	31
Total number of sherds													
All wares.....	554	266	292	307	359	253	291	350	296	243	327	96	3761

TABLE 3.—DISTRIBUTION BY LEVEL OF SHERDS IN TRENCH 4M

WARES	Percentage of total sherds in level														Total No.
	Lev. 1	Lev. 2	Lev. 3	Lev. 4	Lev. 5	Lev. 6	Lev. 7	Lev. 8	Lev. 9	Lev. 10	Lev. 11	Lev. 12	Lev. 13	Lev. 14	
Narrío Red-on-Buff.....	18.9	18.2	9.8	28.8	41.7	18.7	29.4	17.2	19.8	23.6	19.3	21.4	14.3	11.7	1289
Narrío Red-on-Buff (Variant C).....	.....	.....	.....	0.6	0.9	.....	0.7	0.4	0.5	0.2	0.2	0.2	.....	.....	18
Narrío Red-on-Buff Fine.....	0.9	1.4	0.4	44.9	44.3	64.0	57.4	72.6	66.2	64.4	67.4	67.0	81.0	85.1	3051
Cañar Polished.....	1.3	1.0	.....	5.9	3.9	8.0	7.1	6.4	9.1	5.0	10.9	9.7	3.5	3.2	334
Granulated.....	1.0	.....	.....	1.4	3.1	1.4	3.3	1.4	4.0	5.0	1.7	0.7	.....	.....	117
Narrío Gross.....	75.6	75.7	85.9	16.4	4.2	6.2	1.9	2.0	.....	0.3	0.3	0.6	.....	.....	786
Engraved.....	.....	.....	.....	.....	0.6	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
Puruhá.....	.....	.....	1.3	0.3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4
Tunachuan.....	2.3	3.4	2.6	1.7	0.5	.....	0.2	.....	.....	.....	.....	.....	.....	.....	33
Others.....	0.3	.....	.....	.....	0.8	1.7	.....	.....	0.4	1.5	0.2	0.4	1.2	.....	29
Total number of sherds															
All wares.....	307	296	234	354	647	289	425	551	449	661	543	463	258	188	5665



TABLE 4.—DISTRIBUTION BY LEVEL OF SHERDS IN TRENCH 15

WARES	<i>Percentage of total sherds in level</i>																Total No.
	Lev. 1	Lev. 2	Lev. 3	Lev. 4	Lev. 5	Lev. 6	Lev. 7	Lev. 8	Lev. 9	Lev. 10	Lev. 11	Lev. 12	Lev. 13	Lev. 14	Lev. 15	Lev. 16	
Narrío Red-on-Buff.....	22.3	10.1	31.1	12.8	10.0	12.1	12.8	4.6	4.4	1.6	....	4.6	4.9	6.3	5.0	....	185
Narrío Red-on-Buff..... (Variant C)	0.7	....	0.4	....	....	....	....	....	....	....	....	....	....	....	....	....	2
Narrío Red-on-Buff Fine...	5.8	6.4	46.5	77.9	90.0	69.7	79.5	91.5	91.2	95.2	86.2	83.8	91.8	78.1	85.0	94.7	1049
Cañar Polished.....	....	1.8	5.3	4.8	....	18.2	7.7	2.3	3.5	2.4	5.2	10.8	....	15.6	10.0	....	72
Granulated.....	....	....	1.3	....	....	....	....	0.8	0.9	....	....	....	....	....	....	....	5
Narrío Gross.....	71.2	79.9	14.9	2.2	....	....	....	....	....	....	....	....	....	....	....	....	273
Engraved.....	....	....	0.4	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Puruhá.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Tunahuán.....	1.8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3
Others.....	....	....	1.8	0.5	....	....	....	0.8	....	0.8	8.6	0.8	3.3	....	....	5.3	21
<i>Total number of sherds</i>																	
All wares.....	139	169	228	227	30	83	39	130	113	125	116	130	61	32	20	19	1611

TABLE 5.—DISTRIBUTION BY LEVEL OF SHERDS IN TRENCH 16

WARES	<i>Percentage of total sherds in level</i>																Total No.
	Lev. 1	Lev. 2	Lev. 3	Lev. 4	Lev. 5	Lev. 6	Lev. 7	Lev. 8	Lev. 9	Lev. 10	Lev. 11	Lev. 12	Lev. 13	Lev. 14	Lev. 15	Lev. 16	
Narrío Red-on-Buff.....	48.2	64.9	66.2	50.8	66.7	35.4	31.0	12.9	33.8	11.0	28.9	4.8	....	....	....	....	725
Narrío Red-on-Buff..... (Variant C)	....	....	....	0.7	1.5	....	....	....	....	....	....	....	....	....	....	....	2
Narrío Red-on-Buff Fine.....	4.6	10.1	13.3	26.1	20.4	50.0	58.0	30.7	60.8	82.9	61.6	82.2	....	....	....	....	663
Cañar Polished.....	0.8	0.9	1.5	3.7	....	10.4	7.0	5.8	3.6	4.9	9.5	12.4	....	....	....	....	76
Granulated.....	....	0.3	....	2.2	1.5	4.2	1.0	0.6	....	....	....	....	....	....	....	....	9
Narrío Gross.....	44.8	20.9	17.9	15.7	8.4	....	3.0	....	1.8	1.2	....	0.6	....	....	....	....	240
Engraved.....	0.4	1.6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	6
Puruhá.....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Tunahuán.....	1.2	0.3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	4
Others.....	....	1.0	1.1	0.8	1.5	....	....	....	....	....	....	....	....	....	....	....	7
<i>Total number of sherds</i>																	
All wares.....	237	316	195	134	69	48	100	155	56	82	211	129	....	....	....	....	1732

## BIBLIOGRAPHY

In an attempt to compile a complete bibliography on the archaeology of Ecuador we have included, in addition to the works we have consulted and those cited in the text, many publications which we have not seen. The most important specific and general works are marked with an asterisk.

### *Abbreviations*

- AUC     Anales de la Universidad Central, Quito, Ecuador  
 BANH   Boletín de la Academia Nacional de Historia, Quito, Ecuador  
 BSE     Boletín de la Sociedad Ecuatoriana de Estudios Históricos, Quito, Ecuador  
 AMNH   Anthropological Papers, American Museum of Natural History, New York  
 FMNH   Anthropological Series, Field Museum of Natural History, Chicago  
 RCHC   Revista de la Sociedad de Historia de Cuenca, Ecuador  
 JSAP   Journal de la Société des Américanistes de Paris
- 

### ANTHONY, RAOUL, and RIVET, PAUL

1908. Recherches anatomiques sur les ossements (os des membres) des abris sous roches de Paltacalo. *Bulletins et Mémoires de la Société d'Anthropologie de Paris*, sér. 5, vol. 9, pp. 314-430.

### ARRIAGA, JESUS

1922. *Apuntes de arqueología Cañar*. Cuenca.

### BAMPS, ANATOLE

1879. Les antiquités ecuatoriennes du Musée Royal d'Antiquités de Bruxelles. *Compte Rendu du Congrès des Americanistes*, 3rd Session, vol. 2, pp. 47-143, 40 plates. Brussels.  
 1887. Tomebamba, antique cité de l'empire des Incas. Louvain.  
 1888. Les antiquités ecuatoriennes du Musée Royal d'Antiquités de Bruxelles. *Bulletin de la Société Royale Belge de Géographie*, vol. 12, pp. 121-152, 253-284. Illustrated.

### BARBARENA, SANTIAGO

1893. Origen de las tribus indígenas del Ecuador. *Repertorio Salvadoreño*, pp. 13-23. San Salvador.

### BARRERA, ISAAC J.

1918. El Padre Don Juan de Velasco. BSE, vol. 1, pp. 136-144.  
 1938. La prehistoria ecuatoriana. *Realidades Ecuatorianas*, Publicaciones de la Universidad Central, pp. 9-42.

### BERGSOE, PAUL

- \*1937. The metallurgy and technology of gold and platinum among the pre-Columbian Indians. *Ingeniørvidenskabelige Skrifter*, No. A44. Copenhagen.  
 \*1938. The gilding process and the metallurgy of copper and lead among the pre-Columbian Indians. *Ingeniørvidenskabelige Skrifter*, No. A46. Copenhagen.

### BEUCHAT, H.

1912. *Manuel d'archéologie américaine*. Paris.

## BOLLAERT, WILLIAM

1860. Antiquarian, ethnological and other researches in New Granada, Ecuador, Peru and Chile. London.

1870. On the ancient or fossil pottery found on the shores of Ecuador. *Memoirs of the Anthropological Society of London*, vol. 3, pp. 163-166.

## BUITRON CHAVES, ANIBAL

1942. Reconocimiento arqueológico del alto Ecuador austral. *BANH*, vol. 22, No. 59, pp. 153-173.

## CERMAK, KLIMENT

1894. Prähistorische Altertümer von Ecuador in America. *Zeitschrift für Ethnologie*, vol. 26, pp. 470-471.

## \*CIEZA DE LEON, PEDRO DE

1553. Parte primera de la crónica del Perú. Seville.

## CLEMENT, ANDRE

1932. Note sur la dureté des haches pre-colombiennes de l'Equateur et du Mexique. *JSAP*, n. ser., vol. 24, pp. 85-91.

1935. Contribution a l'étude de la métallurgie pre-colombienne. *JSAP*, n. ser., vol. 27, pp. 418-458.

## CODY, BERTHA P.

1941. Gold ornaments of Ecuador. *Masterkey*, vol. 15, No. 3, pp. 87-95, 3 figs. Southwest Museum, Los Angeles.

## CORBETT, JOHN M.

1941. A copper mould from Ecuador. *El Palacio*, vol. 48, No. 2, pp. 34-37.

## CORDERO PALACIOS, OCTAVIO

1924. El Quichua y el Cañari. Cuenca.

## CRESPO ORDOÑEZ, RICARDO

1923. Exportación de objetos arqueológicos.

## \*DORSEY, GEORGE A.

1901. Archaeological investigations on the island of La Plata. *FMNH*, vol. 2, No. 5.

## DURAN, MIGUEL T.

1930. Entierros en Huapán. *RCHC*, No. 16, pp. 168-176, 2 plates.

1931. La civilización tiahuanacuense en Hatun-Cañar. *RCHC*, No. 18, pp. 190-202; No. 19, pp. 310-319.

1936. Introducción a nuestros estudios arqueológicos. *RCHC*, No. 26, pp. 99-104.

1937. Dos cartas. *RCHC*, No. 29, pp. 1-8.

1938a. Cuyes y Jima. *RCHC*, No. 31, pp. 201-209.

1938b. Las ruinas de Xochicalco y Chimu. *RCHC*, No. 32, pp. 328-333.

## ESPINOSA, LUIS DARIO

1931. Discurso. *RCHC*, No. 18, pp. 166-171.

## ETZELT, FRANZ

1936. Restos de mamíferos de las tobas pleistocenas de Punfín, Ecuador. *AUC*, No. 298.

## FARABEE, W. C.

1921. A golden hoard from Ecuador. *The Museum Journal*, vol. 12, pp. 43-52. Philadelphia.

FERDON, EDWIN N., JR.

- 1940a. Investigación arqueológica en el Ecuador. *BANH*, vol. 29, No. 55, pp. 103-108.
- 1940b. The archaeological survey of Ecuador. *El Palacio*, vol. 47, No. 6, pp. 137-144.
- \*1940. Reconnaissance in Esmeraldas. *El Palacio*, vol. 47, No. 12, pp. 257-274.
- \*1941a. Reconnaissance in Esmeraldas. *El Palacio*, vol. 48, No. 1, pp. 7-15.
- \*1941b. The excavation at La Libertad. *El Palacio*, vol. 48, No. 2, pp. 38-42.
- 1941c. Preliminary notes on artifacts from La Libertad, Ecuador. *El Palacio*, vol. 48, pp. 204-210.
- 1942. Excavaciones arqueológicas cerca de la Libertad, provincia de Guayas. *BANH*, vol. 22, No. 59, pp. 75-81.

— and CORBETT, JOHN MAXWELL

- 1941. Depósitos arqueológicos de La Tolita. *BANH*, vol. 21, No. 57, pp. 5-15.

GONZALEZ DE LA ROSA, MANUEL

- 1908. Les Caras de l'Equateur et les premiers résultats de l'expédition G. Heye sous la direction de M. Saville. *JSAP*, n. ser., vol. 5, pp. 85-93.

GONZALEZ SUAREZ, FEDERICO

- \*1878. Estudio histórico sobre los Cañaris, antiguos habitantes de la provincia del Azuay en la República del Ecuador. Quito.
- \*1892. Atlas arqueológico ecuatoriano. Quito.
- 1904. Prehistoria ecuatoriana. Ligeras reflexiones sobre las razas indígenas que poblaban antiguamente el territorio actual de la República del Ecuador. 87 pp., 5 plates. Quito.
- 1910. Investigaciones arqueológicas sobre los aborígenes del Carchi y de Imbabura. Quito.
- 1915. Notas arqueológicas. Quito.
- 1922. See 1878. Second edition published in Cuenca.

GRIJALVA, CARLOS E.

- 1921. Nombres y pueblos de la antigua provincia de Imbabura. *BANH*, vol. 1, Nos. 3-4, pp. 33-70.
- 1938. La expedición de Max Uhle a Cuasmal o sea la proto-historia de Imbabura y Charchi. Quito.

HAMY, E. T.

- 1882. Le tombeau de Tres Molinos, près Guano. *Decades Americanae*, Nos. 1-2, pp. 27-28.
- 1897. Galerie américaine du Musée d'Ethnographie de Trocadero. 50 plates. Paris.

HEUZEY, M. L.

- 1870. Le trésor de Cuenca. *Gazette des Beaux-Arts*, vol. 4. Paris.

HUERTA RENDON, FRANCISCO

- 1940. Una civilización precolombina en Bahía de Caráquez. *Revista del Colegio Nacional Vte. Rocafuerte*, No. 51, pp. 85-96. Guayaquil.

JIJON Y CAAMAÑO, JACINTO

- 1912. El tesoro de Itschimbía. London.
- \*1914. Contribución al conocimiento de los aborígenes de Imbabura. Madrid.
- 1918a. Una punta de Jabalina de Puengasí (Pichincha). *BSE*, vol. 1, No. 2, p. 109.

- 1918b. Artefactos prehistóricos del Guayas. BSE, vol. 1, No. 3, pp. 253-275, 14 plates.
- 1919a. Artefactos prehistóricos del Guayas. BSE, vol. 2, No. 5, pp. 169-172.
- \*1919b. Contribución al conocimiento de las lenguas indígenas, que se hablaron en el Ecuador interandino y occidental, con anterioridad a la conquista española. BSE, vol. 2, No. 6, pp. 340-413.
- \*1920a. Nueva contribución al conocimiento de los aborígenes de la provincia de Imbabura. BSE, vol. 4, No. 10, pp. 1-120; vol. 4, No. 11, pp. 183-245.
- 1920b. Los tincullpas y notas acerca de la metalurgia de los aborígenes del Ecuador. BSE, vol. 5, Nos. 13-14, pp. 4-45.
1922. La edad del bronce en América del Sur. BANH, vol. 4, No. 9, pp. 119-126, 1 plate.
- \*1927. Puruhá: contribución al conocimiento de los aborígenes de la provincia del Chimborazo. 2 vols., Quito. (Reprinted from BANH, Nos. 6, 12, 14, 17-26, 1921-24.)
1929. Notas de arqueología cuzqueña. Dios y Patria, Nos. 22-23. Riobamba.
- \*1930. Una gran marea cultural en el noroeste de Sudamérica. JSAP, n. ser., vol. 22, pp. 107-197.
1933. Curso de prehistoria ecuatoriana dictado en la Universidad Central de Quito. Printed by Universidad Central. Quito.
- \*1941. El Ecuador interandino y occidental. Vol. 1. Quito.
- and LARREA, CARLOS M.
1918. Un cementerio incásico y notas acerca de los Incas en el Ecuador. Revista de la Sociedad Jurídico-Literaria, vol. 20, pp. 159-260. Quito. (Reprinted by Universidad Central. Quito, 1918.)
- JOYCE, T. A.
1912. South American archaeology. London.
- \*KIDDER, ALFRED, II
1940. South American penetrations into Middle America, in *The Maya and their neighbors*, pp. 441-459. New York.
- LARREA, CARLOS M.
1919. Notas acerca de dos objetos arqueológicos de oro hallados en Imbabura. BSE, vol. 2, No. 5, pp. 208-216, 2 plates.
- and JIJON Y CAAMAÑO, JACINTO
1919. Notas acerca de la arqueología de la provincia de Esmeraldas. Contribución al conocimiento de los aborígenes de La Tola. BSE, vol. 3, Nos. 7-8, pp. 87-109.
- LE GOUHIR, JOSE MARIA
- 1922-24. Tesis de la prehistoria ecuatoriana. Series I-III in *Revista de la Asociación Católica de la Juventud Ecuatoriana*. Series IV, Los Caras, RCHC, No. 9, 1923, pp. 436-452; No. 10, 1924, pp. 1-20.
1939. Estudios de la prehistoria ecuatoriana. BANH, vol. 18, No. 54, pp. 38-58.
1940. Estudios de la prehistoria ecuatoriana. BANH, vol. 19, No. 55, pp. 68-103.
- LEON, SEGUNDO
1935. Excavaciones de tolas realizadas en la región de Intag. AUC, No. 293, pp. 187-207.
- LEON, TITO DE
1939. Ingapirca; monumento incásico que el Ecuador está perdiendo. *Revista Municipal, Guayaquil*, vol. 14, No. 59, pp. 54-59.

\*LOTHROP, SAMUEL K.

1940. South America as seen from Middle America, in *The Maya and their neighbors*, pp. 417-429. New York.

MARKHAM, CLEMENTS R.

1864. On quartz cutting instruments of the ancient inhabitants of Chanduy, near Guayaquil. *Anthropological Review* (Journal of the Anthropological Society of London), vol. 2, pp. 57-61.

MATOVELLE, JULIO J. M.

- n.d. *Las Ruinas de Tomebamba*. Cuenca.

1921. *Cuenca de Tomebamba*. Cuenca.

MEANS, PHILIP AINSWORTH

1931. *Ancient civilizations of the Andes*. New York.

MERA I., JUAN LEON

1919. *Las cuevas de San Pedro*. BSE, vol. 2, No. 5, pp. 196-207.

MORA, ALFONSO M.

1938. Apuntaciones de prehistoria sobre restos de civilizaciones americanas. RCHC, No. 30, pp. 170-192; No. 31, pp. 243-266.

MORENO MORA, M.

1922. Contribución al estudio de la lingüística y etnología cañaris. *Revista de Colegio Nacional Benigno Malo*, vol. 1, No. 1. Cuenca.

ORCHARD, W. C.

1925. Minute gold beads from La Tolita, Ecuador. *Museum of the American Indian*, Heye Foundation, *Indian Notes*, vol. 2.

PASTOR, CESAR ALFONSO

1918. *Barros precolombinos del Ecuador*. Boletín de la Real Academia de Historia, vol. 72, pt. 6. Madrid.

PROAÑO, JUAN FELIX

- 1918a. Tradiciones de Cacha—La familia Duchicela. *El Observador*, No. 75. Riobamba.

- 1918b. Tradiciones de Puruhá—La fortaleza de Cacha. *El Observador*, No. 76. Riobamba.

- 1918c. El Ilustrísimo Sr. González Suárez y la historia del antiguo reino de Quito del P. Juan de Velasco. *El Observador*, No. 77. Riobamba.

- 1918d. La historia del antiguo reino de Quito del P. Juan de Velasco y la arqueología ecuatoriana. *El Observador*, No. 79. Riobamba.

- 1918e. El baluarte de Macají (Callana Pamba). *El Observador*, No. 86. Riobamba.

- 1918f. La tola de Macají. *El Observador*, Nos. 81 and 89. Riobamba.

- 1918g. Los monumentos incásicos de Palmira. *El Observador*, No. 91. Riobamba.

- 1918h. Monumentos arqueológicos en el valle de Guano. *El Observador*, Nos. 108 and 139. Riobamba.

1923. Puruhá, su arqueología, sus tradiciones. *Dios y Patria*, vol. 1, No. 1. Riobamba.

RIVET, PAUL

- \*1908. La race de Lagoa Santa chez les populations pre-colombiennes de l'Equateur. *Bulletins et Mémoires de la Société d'Anthropologie de Paris*, sér. 5, vol. 9, pp. 209-274.

ROTH, WALTER E.

1924. An introductory study of the arts, crafts, and customs of the Guiana Indians. Bureau of American Ethnology, 38th Annual Report.

RUMAZO GONZALEZ, JOSE

1933. El Ecuador en la América prehispánica. 207 pages, 10 plates.

SAVILLE, MARSHALL H.

- \*1907. The antiquities of Manabi, Ecuador. Contributions to South American Archaeology, George G. Heye Expedition, vol. 1. New York.  
1909. Archaeological researches on the coast of Esmeraldas. Sixteenth Congress of Americanists, Vienna, pp. 337 ff.  
\*1910. The antiquities of Manabi, Ecuador. Contributions to South American Archaeology, George G. Heye Expedition, vol. 2. New York.  
1914. Precolumbian decoration of teeth in Ecuador. American Anthropologist, vol. 16, pp. 387-390.  
1924. The gold-treasure of Sigsig, Ecuador. Leaflets of the Museum of the American Indian, No. 3.

SPILLMAN, F.

1928. Estudio comparado de cráneos humanos antiguos procedentes de la provincia del Carchi, Ecuador. AUC, vol. 40, No. 264.

SPINDEN, H. J.

1939. Archaeological survey of the northern Andes. Transactions of the New York State Academy of Science, ser. 2, vol. 1, No. 5, pp. 83-87.

STOEPEL, K. TH.

1913. Archaeological discoveries in Ecuador and southern Colombia during 1911. Eighteenth International Congress of Americanists, pp. 251-258. London.

SULLIVAN, M. L. R. and HELLMAN, MILO

- \*1925. The Punin calvarium. AMNH, vol. 23.  
1938. El cráneo de Punín. AUC, vol. 60, No. 304, pp. 729-742.

TALBOT, FRANCISCO

1924. Ruinas de Joyaczhí. RCHC, No. 10, pp. 85-90.

UHLE, MAX

1889. Kultur und Industrie südamerikanischer Völker. Vol. 1. Leipzig.  
\*1920a. Los principios de las antiguas civilizaciones peruanas. BSE, vol. 4; No. 12, pp. 448-458.  
1920b. Los principios de la civilización en la sierra peruana. BSE, vol. 4, Nos. 13 and 14, pp. 44-56, 7 plates.  
1922a. Orígenes centro-americanos. BANH, vol. 4, No. 9, pp. 1-7.  
\*1922b. Sepulturas ricas de oro en la provincia del Azuay. BANH, vol. 4, No. 9, pp. 108-114.  
\*1922c. Influencias mayas en el alto Ecuador. BANH, vol. 4, Nos. 10-11, pp. 205-240, 50 plates; vol. 5, Nos. 12, 13 and 14, pp. 1-3.  
1922d. The excavations at Cañar. The Panamerican Magazine, vol. 34, No. 4. London.  
1922e. El problema paleolítico americano. BANH, vol. 5, Nos. 12, 13 and 14, pp. 302-316, 5 plates.  
1922f. Las Huacas de Cañar. JSAP, vol. 14, pp. 242-244.  
\*1923a. Civilizaciones mayoides de la costa pacífica de Sudamérica. BANH, vol. 6, Nos. 15, 16 and 17, pp. 87-92, 4 plates, 1 map.



- 1923b. Toltecas, Mayas y civilizaciones sudamericanas. *BANH*, vol. 7, No. 18, pp. 1-33, 15 plates.
- \*1923c. Las ruinas de Tomebamba. 6 plates, 11 maps. Quito.
1924. Cronología y relaciones de las antiguas civilizaciones panameñas. *BANH*, vol. 9, Nos. 24, 25 and 26, pp. 190-207, 8 plates.
- 1926a. Los elementos constitutivos de las civilizaciones suramericanas. *AUC*, vol. 36.
- 1926b. Excavaciones arqueológicas en la región de Cumbayá. *AUC*, vol. 37.
- \*1927a. Las antiguas civilizaciones esmeraldeñas. *AUC*, vol. 38.
- 1927b. Estudios esmeraldeños. *AUC*, vol. 39.
- 1928a. Las ruinas de Cuasmal. *AUC*, vol. 40.
- 1928b. Desarrollo y origen de las civilizaciones americanas. *Proceedings, Twenty-third International Congress of Americanists*, pp. 31-43. New York.
- 1928c. Späte Mastodonten in Ecuador. *Proceedings, Twenty-third International Congress of Americanists*, pp. 247-258. New York.
1929. Estado actual de la prehistoria ecuatoriana. Quito.
1930. El reino de Quito. *BANH*, vol. 10, Nos. 27, 28 and 29.
- \*1931. Las antiguas civilizaciones de Manta. *BANH*, vol. 12, Nos. 33, 34 and 35, pp. 5-72, 11 plates.
1933. Estudio sobre las civilizaciones del Carchi e Imbabura. Quito.
- \*1935. Die alten Kulturen Perus im Hinblick auf die Archaeologie und Geschichte des amerikanischen Kontinents. Berlin.
1936. Las antiguas civilizaciones del Ecuador y Perú. *BANH*, vol. 13, Nos. 36-39.
1937. Las ruinas de Cochasquí. *Revista del Museo Nacional de Lima*, vol. 6, pp. 86-91.
1939. Las ruinas de Cochasquí. *BANH*, vol. 18, No. 54, pp. 5-14.
- VEGA TORAL, TOMAS
1920. La Tomebamba de los Incas. Cuenca.
1928. El castillo de Inga-Pirca. *RCHC*, No. 14, pp. 87-99.
1929. El castillo de Inga-Pirca. *RCHC*, No. 15, pp. 43-100.
- VELASCO, JUAN DE
- 1841-44. Historia del reino de Quito en la América meridional. Quito.
- VERNEAU, R.
1907. Les collections anthropologiques ecuatoriennes du Dr. Rivet. *JSAP*, n. ser., vol. 4, pp. 209-224.
- and RIVET, PAUL
- \*1912. *Ethnographie ancienne de l'Equateur*. Vol. 1. Paris.
- \*1922. *Ethnographie ancienne de l'Equateur*. Vol. 2. Paris.
- VILLIERS, CECIL H.
1931. Observaciones sobre las ruinas incásicas de Molleturo (Azuay). *RCHC*, No. 19, pp. 277-289, 1 plate.
- VON BUCHWALD, OTTO
1909. Ecuatorianische Grabhügel. *Globus*, Braunschweig, vol. 96, pp. 154-157.
- 1917a. Tolas ecuatorianas. *El Grito del Pueblo*, Nos. 5532, 5534. Guayaquil.
- 1917b. Tolas ecuatorianas. *Physis*, vol. 3, pp. 250-262, 6 figs. Buenos Aires.

1918a. Migraciones sud-americanas. BSE, vol. 1, No. 3, pp. 227-236.

1918b. Notas acerca de la arqueología del Guayas. BSE, vol. 1, No. 3, pp. 237-252.

1920. Notas etnológicas del Ecuador occidental. BSE, vol. 4, No. 11, pp. 285-293, 7 plates.

1921. Un sello cilíndrico. BSE, vol. 3, No. 6, pp. 155-156, 1 plate.

WALLACE, ALFRED RUSSEL

1853. A narrative of travels on the Amazon and Rio Negro. London.

WILSON, J. S.

1886. Geological notes of the Pacific coast of Ecuador and on some evidences of the antiquity of man in that region. Quarterly Journal of the Geological Society of London, vol. 22, pt. 1, pp. 567-570.

WOLF, THEODOR

1880. Hieroglyphische Steinschrift aus Ecuador. Zeitschrift für Ethnologie, vol. 12, pp. 222-223.

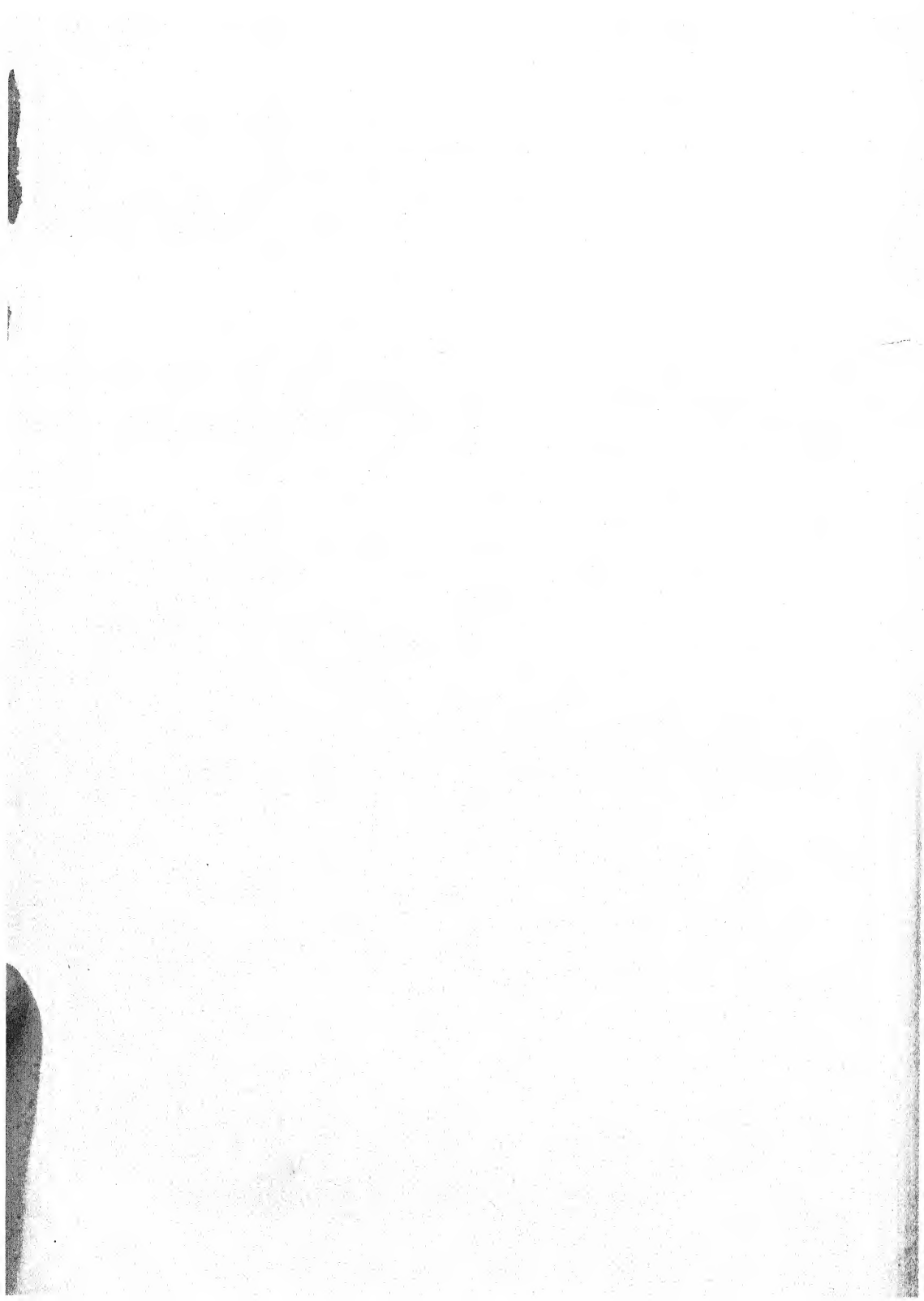
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   Intrusive wares at Cerro Narrio, 56-  
     66, 80, 84, 86, 87  
   Localities and sites: Azuay, 27-29;  
     Cañar, 27; Carapali, 32; Casha-  
     loma, 75-78, 82, 83; Catamayo  
     Valley, 88; Cerro Narrio, 44-66;  
     Chilpas, 32; Gonzol, 25; Guando,  
     32, 33; Guasuntos, 25; Macas, 25,  
     58, 61, 65, 84, 87, 89; Maguaso, 22,  
     23; Quillohuac, 74; Saraguro, 87,  
     88; Shillu, 75, 82; Sumay Pamba,  
     30; Trapichillo, 33; Zula, 20-22  
   "Mayoid" ware, 51  
   Narrio Gross, 54, 56, 74, 76, 79, 91;  
     color and paste, 54; decoration, 56;  
     form, 54; surface finish, 56  
   Narrio Red-on-Buff, 25, 46-50, 74,  
     75, 76, 77, 79, 83, 91; color and  
     paste, 48; decoration, 48; form, 48;  
     Late forms, 48, 50; surface finish,  
     48; Variant A, 49; Variant B,  
     49; Variant C, 49; Variant D, 50  
   Narrio Red-on-Buff Fine, 50-52, 74,  
     75, 76, 77, 83, 91; color and paste,  
     51; decoration, 51; form, 51; sur-  
     face finish, 51  
   paste analysis, 91  
   Peruvian influences, 28, 66, 67  
   Puruhá, 21, 62, 63, 86, 87  
   Quartz-Studded, 25, 58, 75, 78, 84  
   Red Banded Incised, 25, 61, 75, 84  
   Red Engraved, 58, 59, 75, 76  
   San Sebastián, 63, 84  
   Tacalzapa, 56; see also "Clay seat"  
     culture  
   terminology, 46  
   Tuncahuán, 22, 23, 25, 63-66, 86, 87;  
     Variant A, 64; Variant B, 64;  
     Variant C, 65; Variant D, 65;  
     Variant E, 66; Variant F, 66  
   White-on-Red, 65, 74, 75, 78, 84  
 Pottery-smoothers, clay, 70; stone, 68  
 Projectile points, stone, 67; possible  
   use of sting-ray spines as, 68, 69  
 Proto-Nazca, 15  
 Proto-Panzaleo II, 31, 64  
 Puruhá, area, 18, 22, 25, 87; influence  
   in Cañar, 84, 88; movement south-

- ward, 22, 84; people, 25; see also Pottery, Puruhá
- Puruhá-Mochica, proposed language family, 26
- Quillohuac, 74
- Rabbit, 68
- Rivet, Paul, see Verneau and Rivet
- Roth, Walter E., 69
- San Francisco de Sales Convent, 23, 25
- San Sebastián, 84, 87
- Santiago River, 82, 83, 85
- Saraguro, 30-33, 87, 88
- Shell, engraved design on, 69
- Shillu, 75, 82, 87
- Sites; see Pottery, localities
- Spatula, bone, 68
- Spindle whorls, 67, 68, 70
- Sting-ray spines, 68, 69
- Stratification, 17, 79, 80, 86
- Sumay Pamba, 29, 30, 87
- Tacalzhapa, 56; see also "Clay seat" culture
- Tambos, Inca, 18, 19, 34
- Thatch, see *Paja*
- Tiahuanaco, 29, 31, 35, 66, 89
- Tomebamba, 26, 78
- Trapichillo, 33
- Tuncahuán; chronological relation, to  
Early Cerro Narrio, 63, 64, 66, 88,  
to Puruhá, 63, 88, 89; period, in  
Cañar, 35, 63, 64, 84, in Loja, 31;  
see also Pottery, Tuncahuán
- Uhle, Max, 15, 26, 27, 29, 31, 34, 35,  
36, 44, 46, 51, 56, 64, 66, 67, 69,  
72, 83, 85, 87, 88
- Upano Valley; see Macas
- Valle Hermoso, 34, 88
- Verneau, R., and Rivet, P., 19, 26,  
27-29, 31, 34, 64, 70
- Wallace, A. R., 68
- Whistle, bone, 68
- Yuca; see Manioc; Manioc-grater
- Z6, site, 20
- Zula, 18-22, 87





## PLATES



PLATE 1. POTTERY AND METATE FROM ZULA, SITE Z6

FIG. 1. Burial 8; diameter 16 cm.

FIG. 3. 78 cm. long and 66 cm. wide.

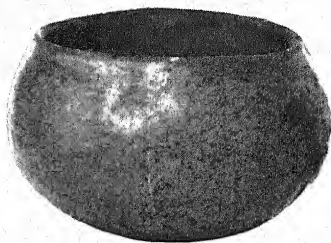
FIG. 2. Burial 8; diameter 12.5 cm.

FIG. 4. Burial 7; diameter 13 cm.

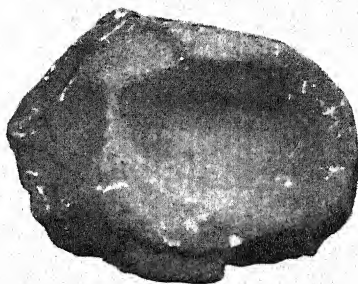
FIG. 5. Burial 8; height 17 cm.



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PLATE 2. POTTERY FROM ZULA; GOETZ COLLECTION

FIG. 1. Height 37 cm.

FIG. 4. Height 39 cm.

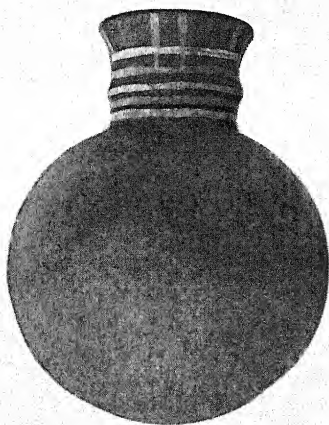
FIG. 2. Diameter 12.5 cm.

FIG. 5. Diameter 14 cm.

FIG. 3. Diameter 13 cm.

FIG. 6. Diameter 19.5 cm.

FIG. 7. Diameter 15 cm.



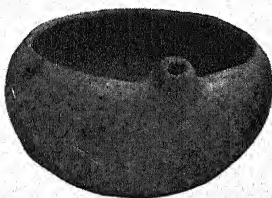
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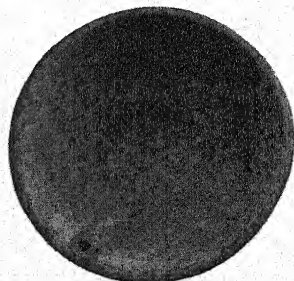
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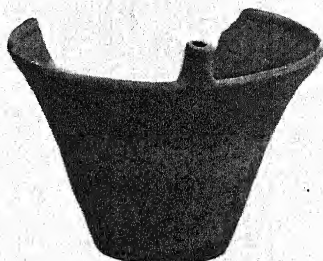
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PLATE 4. POTTERY FROM HACIENDA MAGUASO  
GALLEGOS COLLECTION

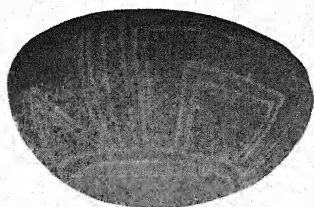
FIG. 1. Diameter 12.5 cm.

FIG. 3. Diameter 17 cm.

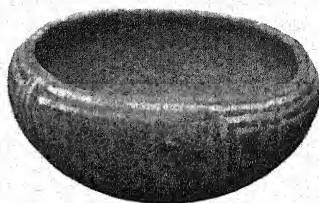
FIG. 2. Diameter 13 cm.

FIG. 4. Diameter 18 cm.

FIG. 5. Diameter 10 cm.



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PLATE 6. SHERDS FROM ALAUSI  
COLLECTION OF CONVENTO SAN FRANCISCO DE SALES

FIGS. 1-8. Glossy Red Engraved.

FIGS. 11-12, 15. Red Banded Incised.

FIGS. 9-10. Thin Gray Engraved.

FIGS. 13-14. Quartz-Studded.



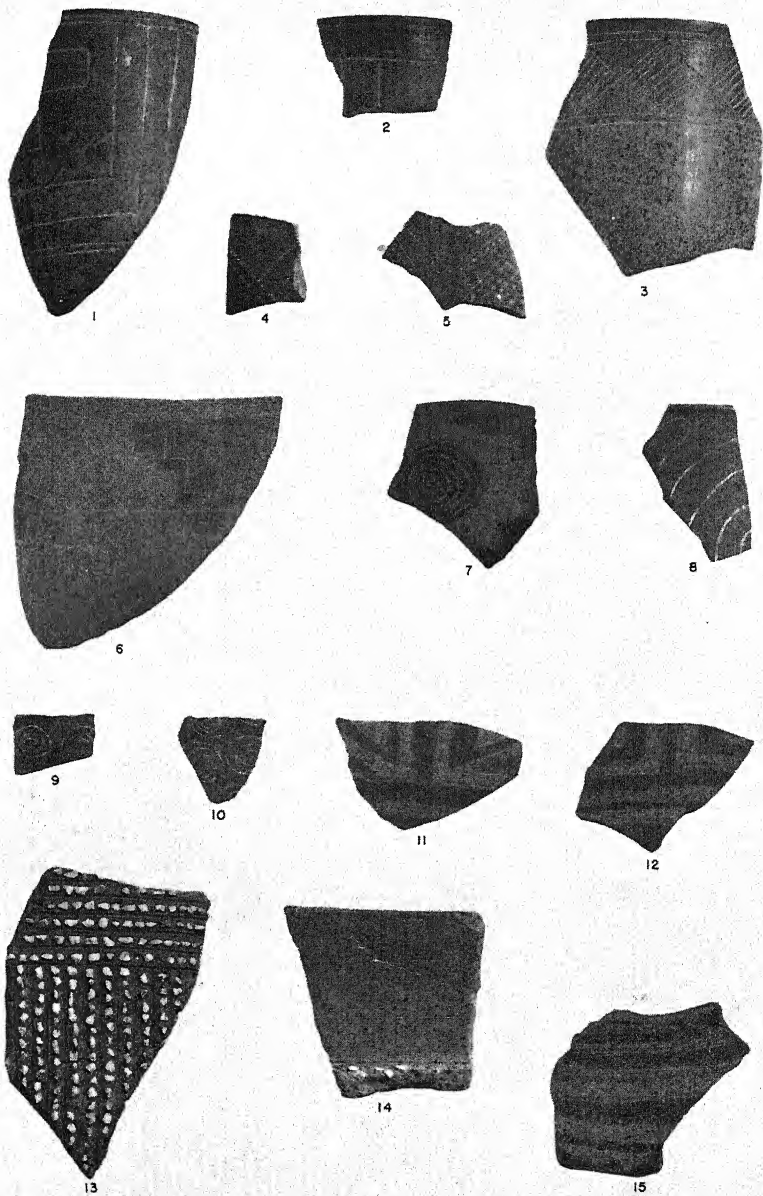


PLATE 7. SHERDS FROM MACAS  
COLLECTION OF UNIVERSIDAD CENTRAL

FIGS. 1-9. Red Banded Incised.

FIG. 16. White-on-Red.

FIGS. 10-15. Local wares(?).

FIG. 17. Quartz-Studded.

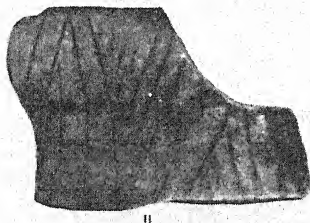
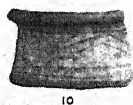
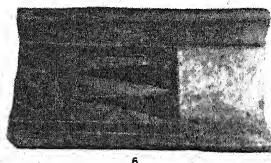
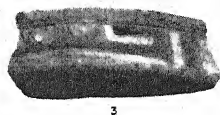
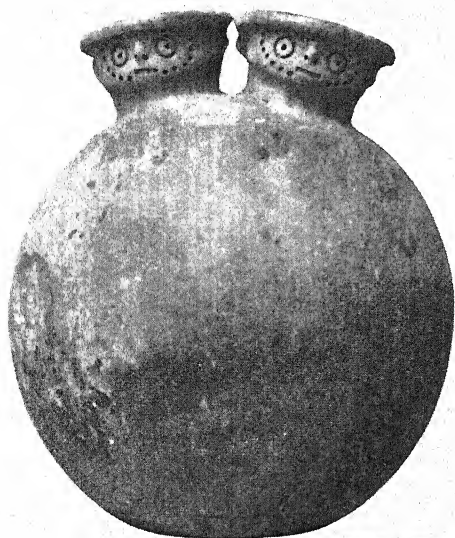


PLATE 8. POTTERY FROM AZUAY

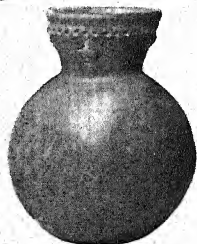
- FIG. 1. Type A face; probably from Quinjeo; diameter 31 cm.; Cordero Collection.
- FIG. 2. Type A face; probably from Quinjeo; height 16 cm.; Durán Collection.
- FIG. 3. Type A face; provenience unknown; diameter 12 cm.; Cordero Collection.
- FIG. 4. Type A face; provenience unknown; height 24 cm.; Cordero Collection.
- FIG. 5. Aberrant type A face (Janus type); provenience unknown; diameter 22 cm.; Cordero Collection.



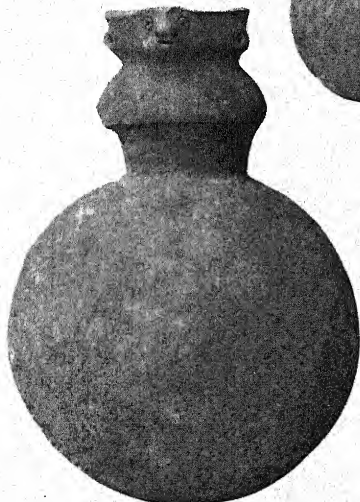
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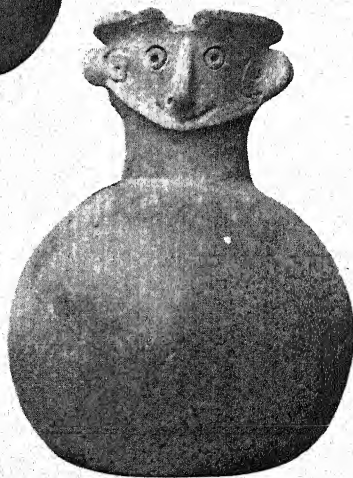
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PLATE 9. POTTERY FROM AZUAY

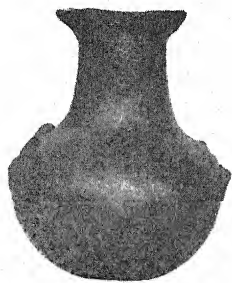
- FIG. 1. Type A face; Culca, near Cuenca; height 16.5 cm.; Verneau and Rivet, 1922, plate 53.
- FIG. 2. Type A face; Paute; height 12 cm.; Verneau and Rivet, 1922, plate 50.
- FIG. 3. Type A face; Paute; height 18 cm.; Verneau and Rivet, 1922, plate 53.
- FIG. 4. Type A face; provenience unknown; height 12 cm.; Durán Collection.
- FIG. 5. Type B face; provenience unknown; height 17.5 cm.; Cordero Collection.
- FIG. 6. Type A face; Paute; height 14.7 cm.; Verneau and Rivet, 1922, plate 53.
- FIGS. 7-8. Type B face (Janus); Cojitambo; height 13.5 cm.; Verneau and Rivet, 1922, plate 52.
- FIG. 9. Type B face; provenience unknown; height 14.5 cm.; Durán Collection.





PLATE 10. POTTERY FROM AZUAY; DURAN COLLECTION

- FIG. 1. Type C face; Chocar, Cañar; height 14.5 cm.  
FIG. 2. Type C face; Gualaceo; height 11 cm.  
FIG. 3. Type C face; Charatsol, near Azogues; height 15 cm.  
FIG. 4. Coastal Chavin type; Puente de El Descanso, Azuay; height 23 cm.  
FIG. 5. Non-communicating double vessel with negative design; provenience unknown; height 6 cm.



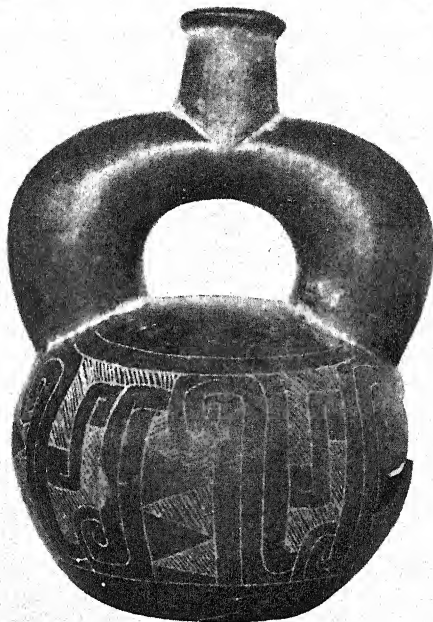
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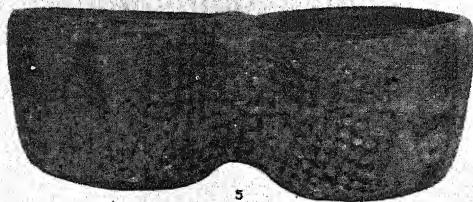
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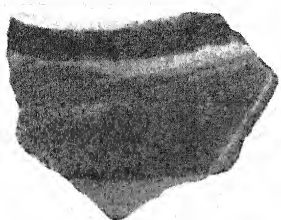


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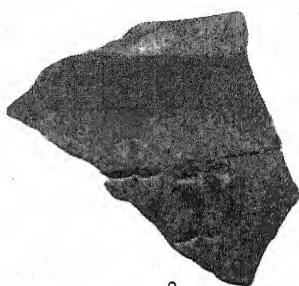
PLATE 11. SHERDS FROM SUMAY PAMBA AND GUANDO

Scale 1: 2

- FIG. 1. Red-on-Buff; Sumay Pamba, site C.
- FIG. 2. Red-slipped ware; Sumay Pamba, site C.
- FIG. 3. Red-on-Buff; Sumay Pamba, site C.
- FIG. 4. Gray ware; Sumay Pamba, site C.
- FIGS. 5-6. Red-slipped bowl rims; Sumay Pamba, site C.
- FIG. 7. Sherd with fabric impression on interior; Guando.
- FIG. 8. Red-slipped compotera; Guando.



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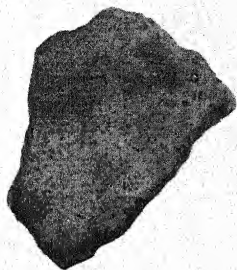
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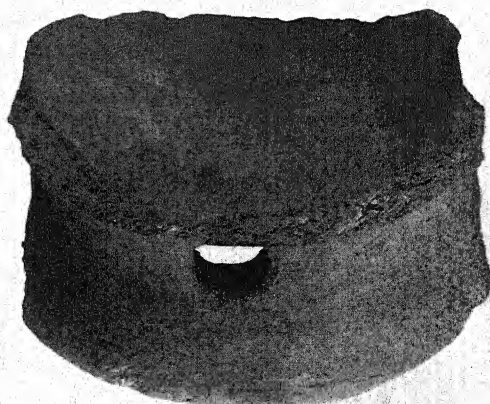
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PLATE 12. SHERDS FROM TRAPICHILLO, CATAMAYO VALLEY

Scale 1: 2.5

FIGS. 1-2. Orange ware with appliqué rims.

FIGS. 3-6. Brick-red ware, appliqué bands with punctates.

FIGS. 7-10. Orange ware with purple painted bands.

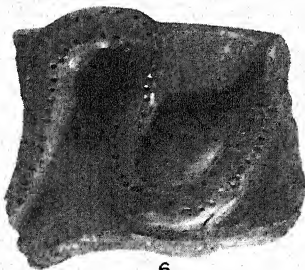
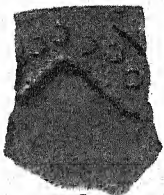
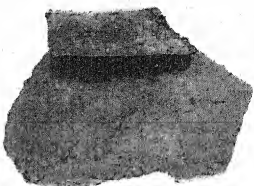
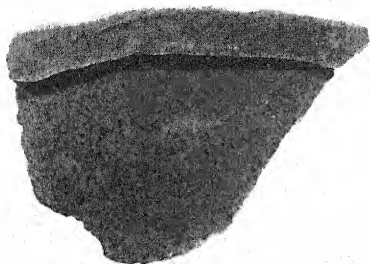


PLATE 13. CERRO NARRIO: GENERAL VIEWS

*Upper:* General view of Cerro Narrío, looking west from the town of Cañar;  
higher hills in background and Rio Quillohuac in ravine in foreground.

*Lower:* Pitted surface on the summit of Cerro Narrío near Trench 6.

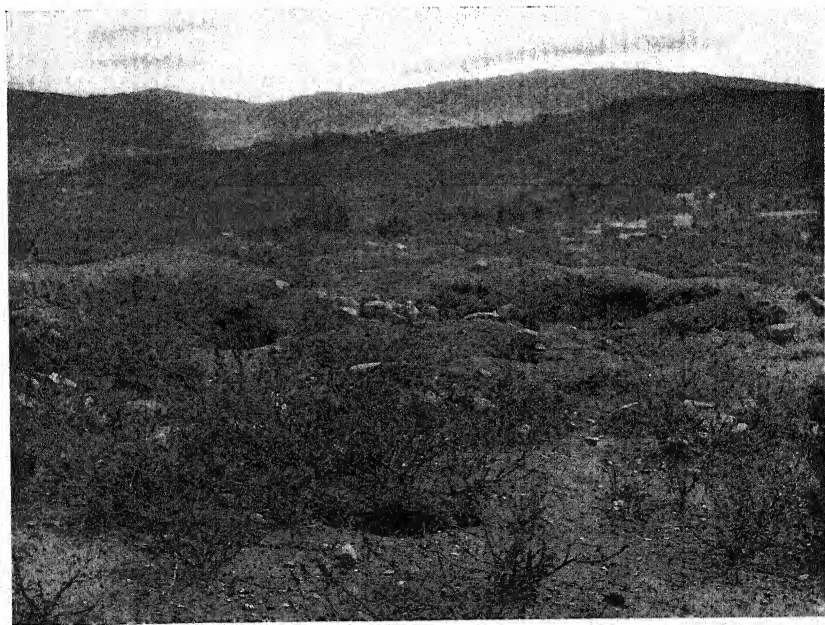
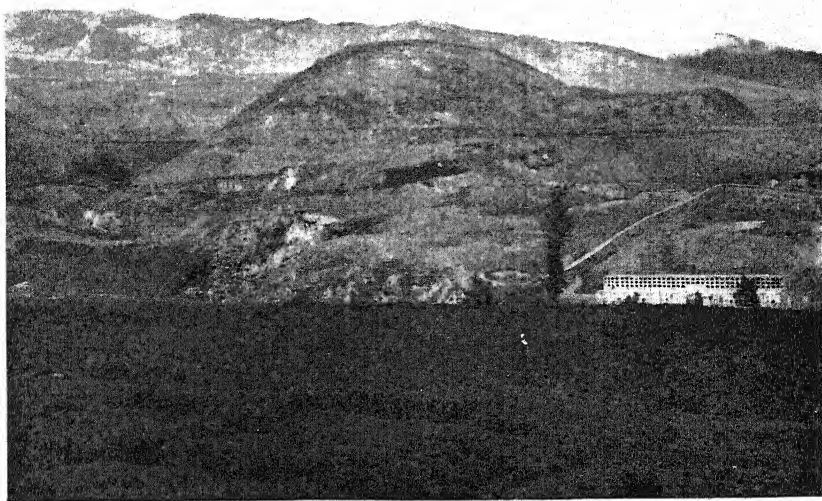




PLATE 14. CERRO NARRIO: VIEWS OF SITE AND TRENCH 6

*Upper:* Pitted surface on the west slope of Cerro Narrío near the summit.

*Lower:* Upper (Late) house in Trench 6, Cerro Narrío. Note pits left by treasure hunters and the line of stones that supported a pole structure.

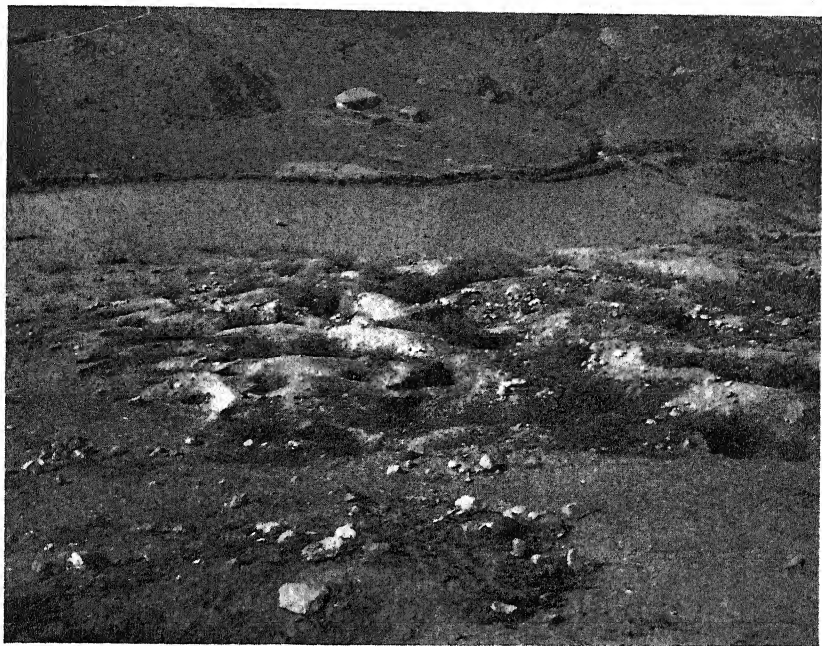


PLATE 15. CERRO NARRIO: TRENCH 1 AND HEARTH IN TRENCH 4

*Upper:* North end of Trench 1, showing postholes and pit cut into the hardpan.

The right-hand trench wall is that shown in Figure 5. Note the light-colored stratum that roughly separates the Early from the Late period.

*Lower:* Hearth in the floor of the upper level (Late) house in Trench 4.



PLATE 16. NARRIO RED-ON-BUFF

Scale (Figs. 2-10) 1: 3.5

FIGS. 6-11, Late forms of Narrío Red-on-Buff; others found in all trench levels

FIG. 1. Cerro Narrío, Trench 4M, level 5; diameter 16 cm.

FIG. 2. Cerro Narrío, Trench 1M, level 10.

FIG. 3. Cerro Narrío, Trench 1S, level 6.

FIG. 4. Cerro Narrío, Trench 15, level 8.

FIG. 5. Cerro Narrío, Trench 1M, level 9.

FIGS. 6-7. Shillu, surface.

FIG. 8. Cerro Narrío, surface.

FIG. 9. Shillu, Pit 1, level 1.

FIG. 10. Shillu, surface.

FIG. 11. Cerro Narrío, Trench 1N, level 4; diameter 13.5 cm.



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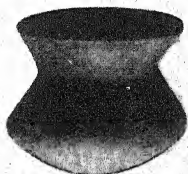
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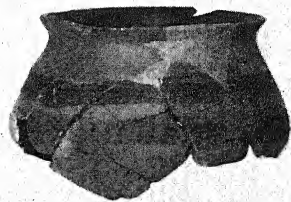
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PLATE 17. CERRO NARRIO: NARRIO RED-ON-BUFF

Scale 1: 3.1

FIG. 1. Late jar type with mottled red and white band; surface.

*Line luster decoration*

FIG. 2. Trench 1N, level 10.

FIG. 4. Trench 4M, level 5.

FIG. 3. Trench 1S, level 13.

FIG. 5. Surface.

FIG. 6. Trench 4M, level 9.

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FIG. 7. Jar with flaring rim and ridge on neck; Trench 1M, level 11.

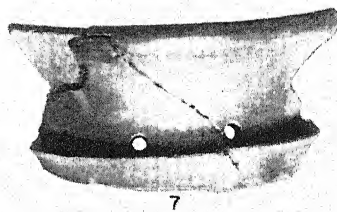
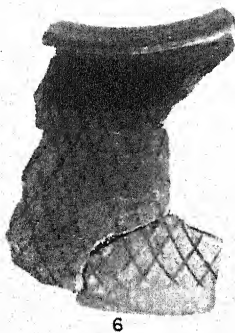
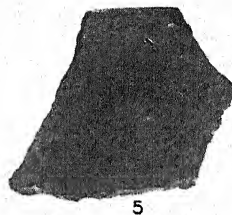
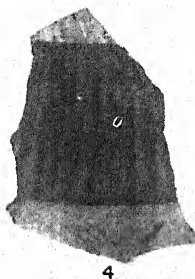
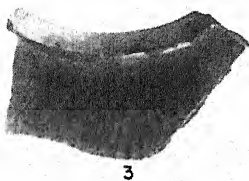
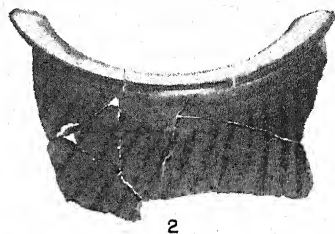




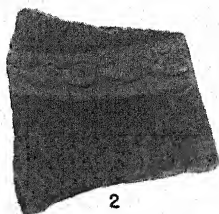
PLATE 18. NARRIO RED-ON-BUFF: DECORATIVE FEATURES

Scale 1:3

- FIG. 1. Pinched line low on shoulder; Cerro Narrío, Trench 1N, level 5.
- FIG. 2. Pinched line on shoulder; Cerro Narrío, Trench 1S, level 10.
- FIG. 3. Punctates on neck; Cerro Narrío, surface.
- FIG. 4. Pinched line on shoulder, purple lines; Cerro Narrío, surface.
- FIG. 5. Punctates on neck, purple lines; Cerro Narrío, surface.
- FIG. 6. Pinched line on shoulder, purple lines; Cerro Narrío, surface.
- FIG. 7. Punctates on neck; Cerro Narrío, surface.
- FIG. 8. Notched welt on neck; Cerro Narrío, surface.
- FIG. 9. Notched welt on body; Cerro Narrío, Trench 1S, level 9.
- FIG. 10. Punched welt below neck; Shillu, Pit 1, level 1.
- FIG. 11. Notched welt; Cerro Narrío, Trench 1S, level 11.
- FIG. 12. Notched welt; Cerro Narrío, Trench 1S, level 12.



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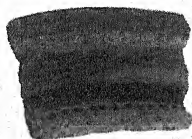
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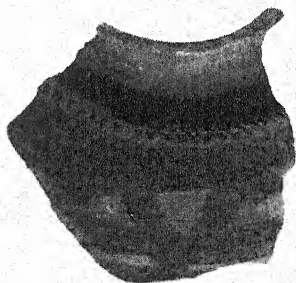
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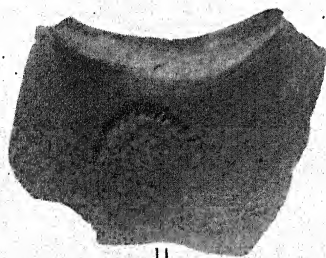
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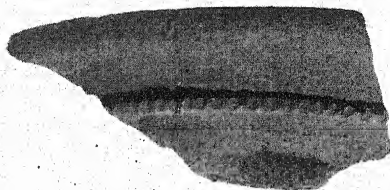
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PLATE 19. CERRO NARRIO: NARRIO RED-ON-BUFF

Scale 1: 3.1

*Variant A*

FIG. 1. Trench 1N, level 9.

FIG. 3. Trench 1M, level 10.

FIG. 2. Trench 1N, level 10.

FIG. 4. Trench 1S, level 13.

*Variant B*

FIG. 5. Trench 1N, levels 11-12.

FIG. 7. Trench 1M, level 13.

FIG. 6. Trench 1N, level 7.

FIG. 8. Trench 1M, level 9.

*Variant C*

FIG. 9. Surface.

FIG. 12. Trench 1 (stratification test),  
level 11.

FIG. 10. Trench 1N, level 10.

FIG. 11. Trench 4M, level 6.

FIG. 13. Trench 3, level 4.

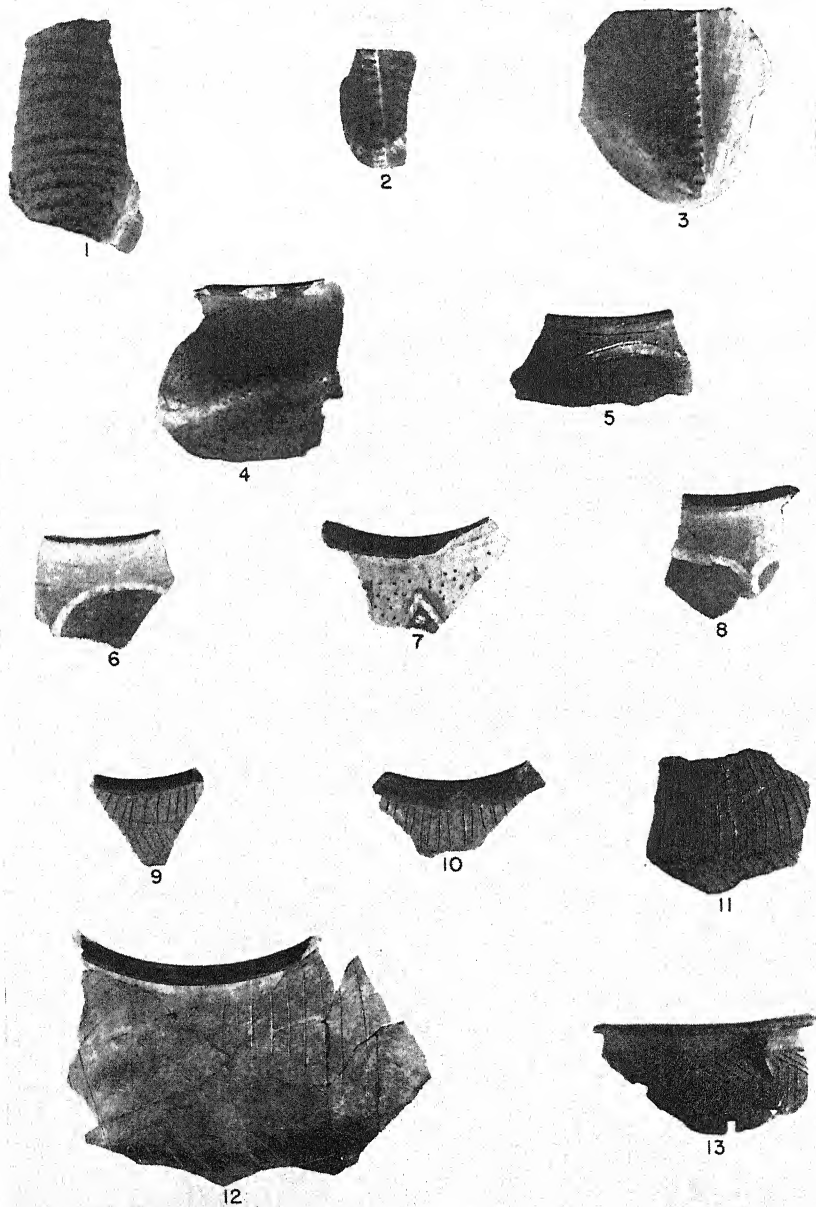


PLATE 20. NARRIO RED-ON-BUFF

Scale 1: 3.2

*Variant D*

- FIG. 1. Cerro Narrío, surface.
- FIG. 2. Cerro Narrío, Trench 1S, level 3.
- FIG. 3. Cerro Narrío, surface.
- FIGS. 4-6. Shillu, surface.
- FIGS. 7-8. Cerro Narrío, surface.
- FIGS. 9-12. Shillu, surface.
- FIGS. 13-14. Cerro Narrío, surface.
- FIGS. 15-17. Nail impressed; Cerro Narrío, surface.
- FIG. 18. Pear-shaped jar; Cerro Narrío, Trench 2, level 2.
- FIG. 19. Nail impressed; Cerro Narrío, surface.



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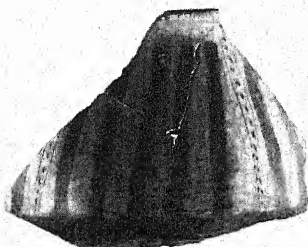
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PLATE 21. NARRIO RED-ON-BUFF FINE

Scale (Figs. 4-9) 1: 3

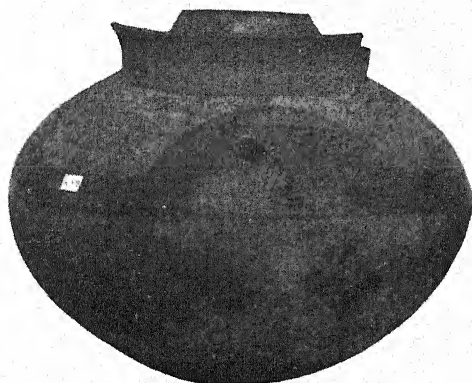
- FIG. 1. Cerro Narrío, Trench 4M, level 4; height 19 cm.
- FIG. 2. Provenience unstated; diameter 12.2 cm.; Uhle, 1922c, fig. 26.
- FIG. 3. Cerro Narrío, diameter 19 cm.; Arriaga Collection.
- FIG. 4. Rim interior; Cerro Narrío, Trench 11, level 12.
- FIG. 5. Rim exterior; Cerro Narrío, Trench 1M, level 12.
- FIG. 6. Rim interior; Cerro Narrío, Trench 11, level 10.
- FIG. 7. Rim interior; Cerro Narrío, Trench 11, level 11.
- FIG. 8. Rim interior; Cerro Narrío, Trench 15, level 12.
- FIG. 9. Rim interior; Cerro Narrío, Trench 1S, level 5.
- FIG. 10. Provenience unstated; diameter 14 cm.; Uhle, 1922c, fig. 22, A.



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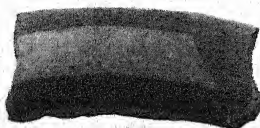
6



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PLATE 22. CERRO NARRIO: NARRIO RED-ON-BUFF FINE

Scale 1: 3

*Painted decorations*

FIG. 1. Trench 15, level 6.

FIG. 5. Surface.

FIG. 2. Trench 1M, level 13.

FIG. 6. Trench 11, level 9.

FIG. 3. Surface.

FIG. 7. Trench 15, level 4.

FIG. 4. Trench 11, level 3.

FIG. 8. Surface.

FIG. 9. Red spiral, and vertical line luster; surface.

*Line luster*

FIG. 10. Trench 11, level 12.

FIG. 13. Trench 11, level 5.

FIG. 11. Trench 1N, level 10.

FIG. 14. Trench 15, level 9.

FIG. 12. Surface.

FIGS. 15-19. Surface.

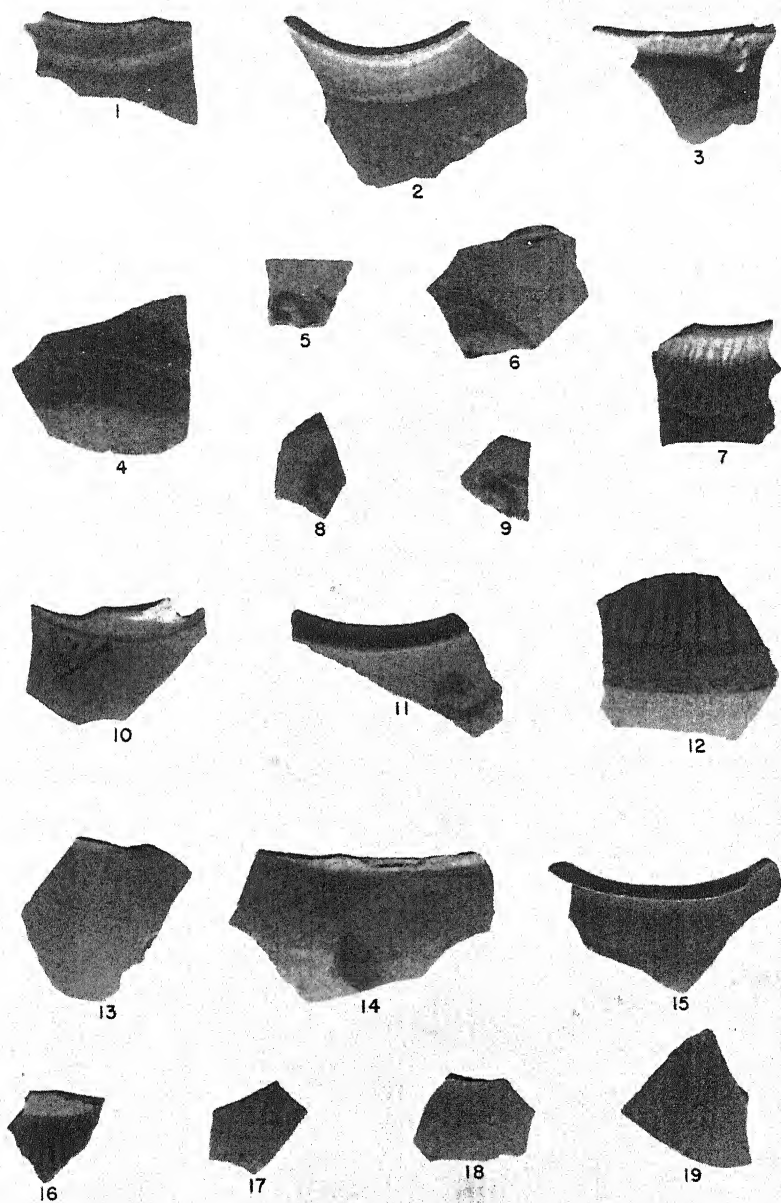


PLATE 23. CERRO NARRIO: NARRIO RED-ON-BUFF FINE

Scale 1: 2.6

*Line luster*

FIGS. 1-3. Surface.

FIG. 4. Trench 11, level 5.

*Jars with bulbous bodies*

FIG. 5. Trench 15, level 10.

FIG. 7. Trench 4M, level 7.

FIG. 6. Trench 1S, level 11.

FIGS. 8-10. Surface.

FIG. 11. Trench 11, level 9.

*Zoomorphic heads*

FIG. 12. Trench 11, level 11.

FIGS. 13-14. Trench 4M, level 7.

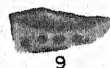
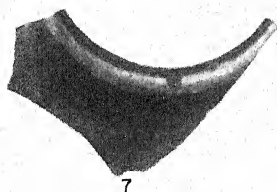
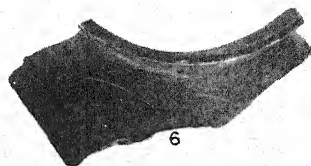
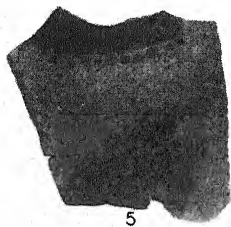
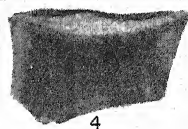


PLATE 24. CERRO NARRIO: ANTHROPOMORPHIC AND  
ZOOMORPHIC DECORATIONS

Scale 1: 2.5

*Early forms*

FIG. 1. Trench 1M, level 13.

FIG. 2. Trench 1N, level 9.

FIG. 3. Surface.

FIG. 4. Trench 1S, level 9.

FIG. 5. Surface.

FIG. 6. Trench 1M, level 10.

*Late forms*

FIG. 7. Trench 14, level 5.

FIG. 8. Surface.

FIG. 9. Trench 6, level 2.

FIG. 10. Trench 10, level 5.

FIG. 11. Trench 6, level 2.

FIG. 12. Surface.



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12

PLATE 25. CAÑAR POLISHED

FIG. 1. Provenience unstated; diameter 10.5 cm.; Uhle, 1922c, fig. 44.

FIG. 2. Provenience unstated; diameter 27 cm.; Uhle, 1922c, fig. 45.

FIG. 3. Cerro Narrío, Trench 11, level 12; diameter 16.5 cm.

FIG. 4. Cerro Narrío, Trench 1N, level 9; diameter 12.5 cm.

FIG. 5. Cerro Narrío, Trench 11, level 11; diameter 12.5 cm.



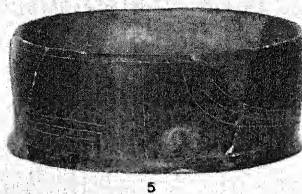
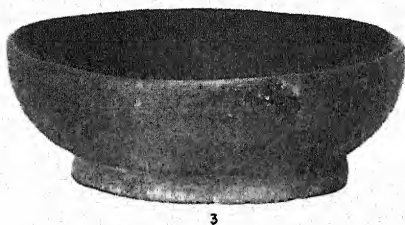
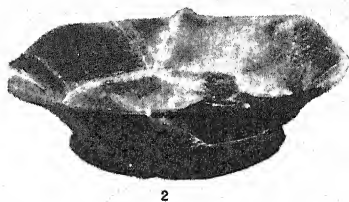
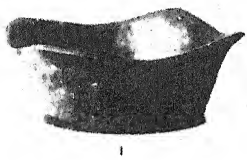




PLATE 26. CERRO NARRIO: CAÑAR POLISHED

Scale 1: 3.2

*Bowls with scalloped rims*

FIG. 1. Trench 1N, level 5.

FIG. 2. Trench 1M, level 13.

FIG. 3. Trench 11, level 11.

*Engraved bowl with vertical wall*

FIG. 4. Trench 4M, level 3.

*Negative design on interior surface*

FIG. 5. Trench 4M, level 8.

FIG. 7. Trench 4M, level 8.

FIG. 6. Trench 4M, level 7.

FIG. 8. Trench 13, level 12.

FIG. 9. Trench 3, level 5.

*Jars with flaring neck and constricted rim*

FIG. 10. Trench 1M, level 10.

FIG. 12. Trench 1M, level 8.

FIG. 11. Line luster; surface.

FIG. 13. Trench 1S, level 3.

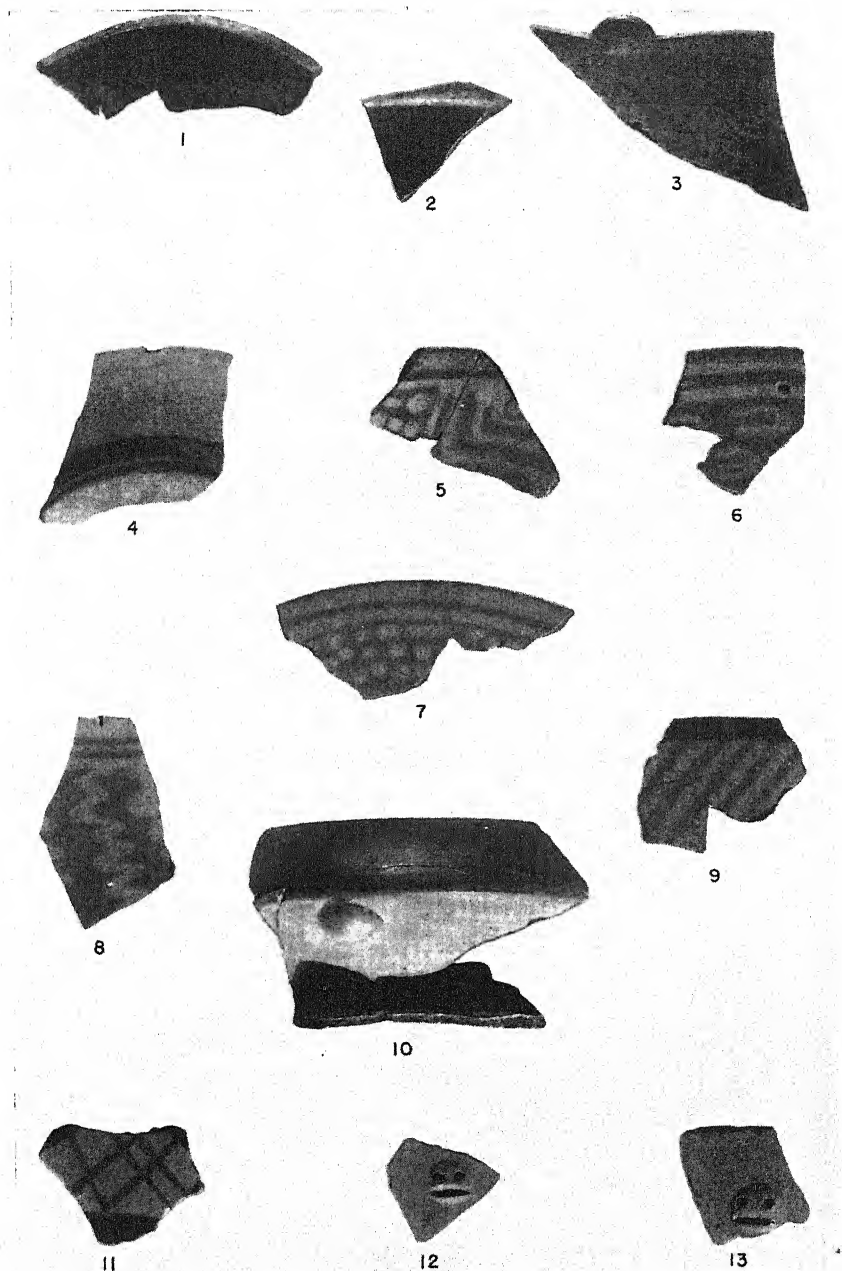


PLATE 27. CERRO NARRIO: GRANULATED WARE AND  
COMPOTERAS WITH PAINTED FEET

Scale 1: 2.5

*Granulated ware*

FIG. 1. Trench 4M, level 9.

FIG. 2. Trench 1N, level 8.

FIG. 3. Trench 4M, level 8.

*Compotera feet with red painted lines*

FIG. 4. Trench 9, level 8.

FIG. 6. Trench 1S, level 6.

FIG. 5. Trench 1S, level 9.

FIGS. 7-10. Surface.

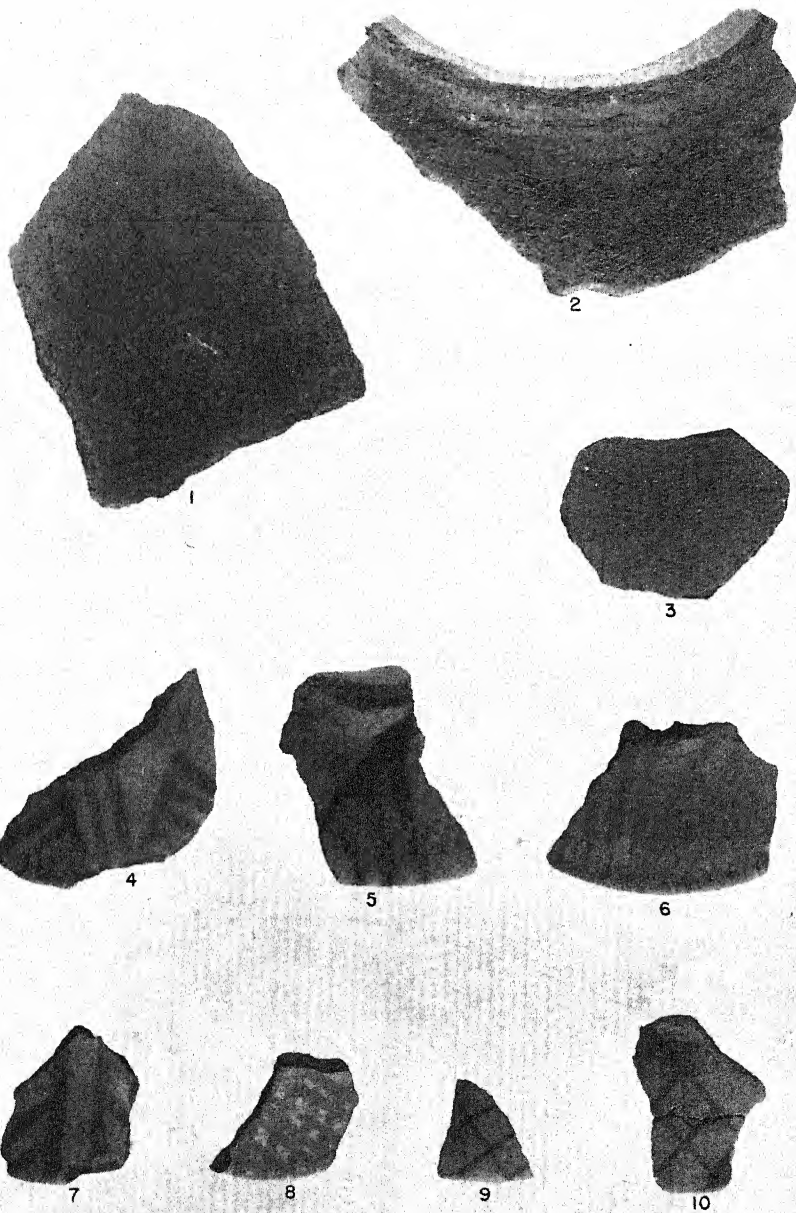


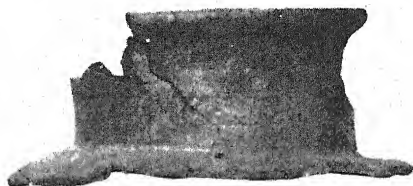
PLATE 28. CERRO NARRIO: NARRIO GROSS

FIG. 1. Trench 6, level 2; height 42 cm.    FIG. 2. Trench 6, level 2; height 17.5 cm.

FIG. 3. Trench 6, level 2; height 76 cm.



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2



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PLATE 29. NARRIO GROSS AND QUARTZ-STUDDED

Scale (Figs. 1-5) 1: 3.2

*Narrío Gross*

FIG. 1. Bowl with horizontal handle; Cerro Narrío, Trench 6, level 2.

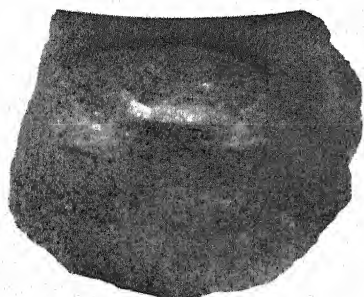
FIG. 2. Tripod leg; Cerro Narrío, Trench 6, level 3.

*Quartz-Studded*

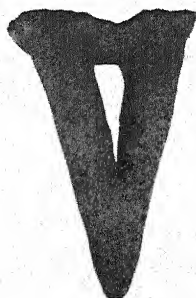
FIG. 3. Cerro Narrío, surface.

FIGS. 4-5. Shillu, surface.

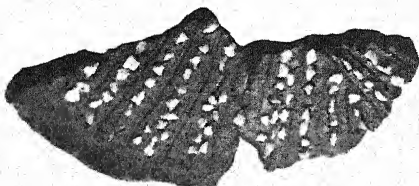
FIG. 6. Huigra; diameter approximately 32 cm.; Konanz Collection.



1



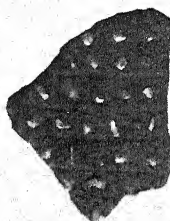
2



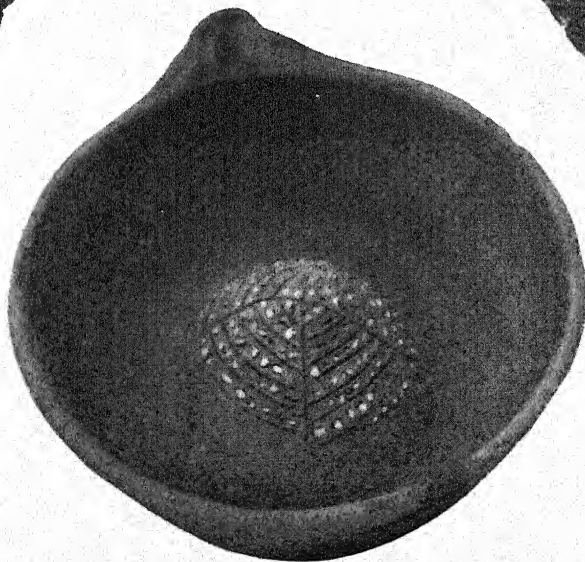
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PLATE 30. CLAY SEATS

FIG. 1. Cerro Narrío, surface; height 6 cm.

FIG. 2. Cerro Narrío, height approximately 28 cm.; Jijón Collection.

FIG. 3. Shillu, Pit 1, level 5; height 11 cm.

FIG. 4. Shillu, Pit 3, level 3; length 16 cm.

FIG. 5. Cerro Narrío, Trench 8, level 3; length 12 cm.

FIG. 6. Cerro Narrío, diameter 25 cm.; Durán Collection.

Figures 1, 3, and 5 are fragments of seat bottoms and are shown upside down.

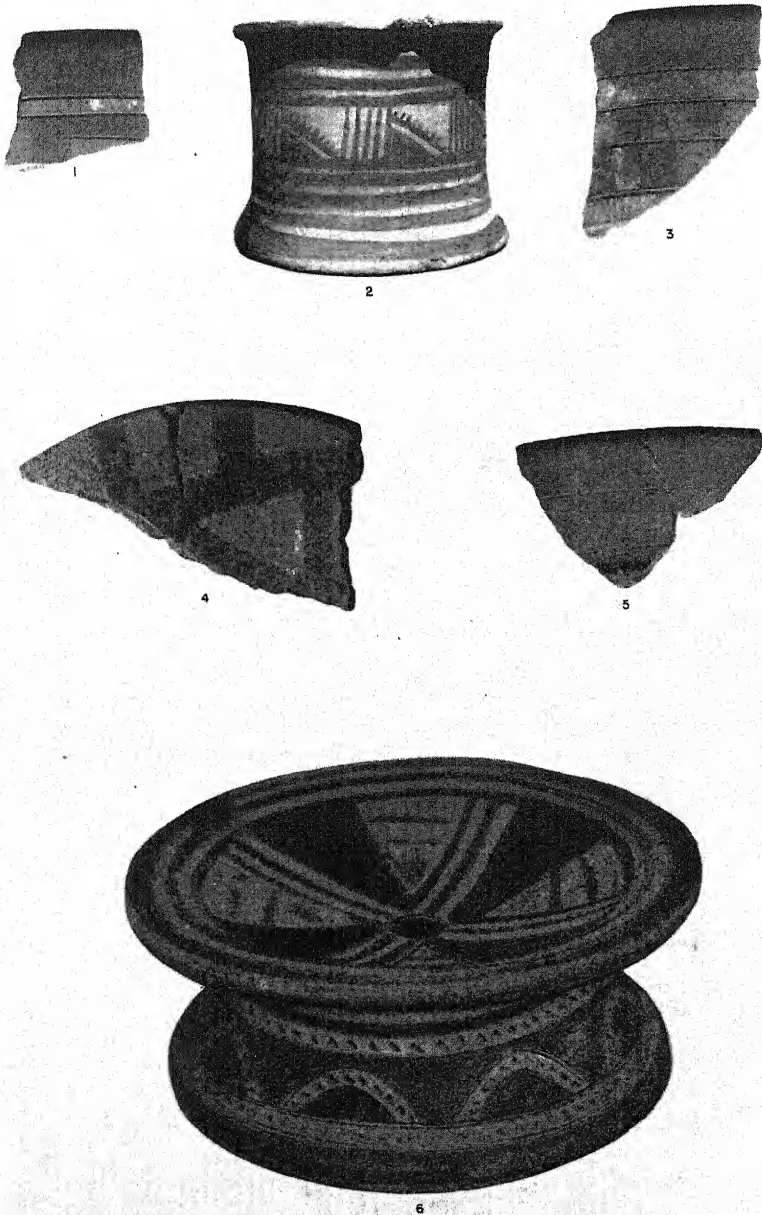


PLATE 31. RED ENGRAVED AND BLACK ENGRAVED

Scale 1:3.2

*Red Engraved*

FIGS. 1-2. Cerro Narrío, surface.

FIG. 5. Cerro Narrío, Trench 1 M, level 4.

FIG. 3. Cerro Narrío, Trench 2, level 2.

FIG. 6. Cerro Narrío, surface.

FIG. 4. Shillu, surface.

FIG. 7. Shillu, Pit 1, level 5.

*Black Engraved*

FIGS. 8-9. Cerro Narrío, surface.

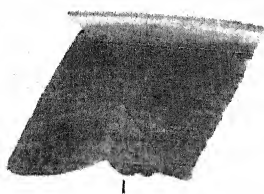
FIG. 12. Cerro Narrío, Trench 6, level 2.

FIG. 10. Cerro Narrío, Trench 1 (stratification test), level 3.

FIG. 13. Cerro Narrío, Trench 2, level 2.

FIG. 11. Shillu, surface.

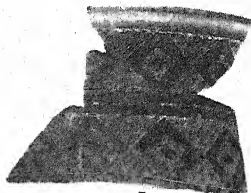
FIG. 14. Cerro Narrío, surface.



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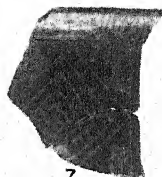
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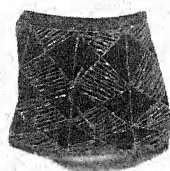
11



12



13



14

PLATE 32. GLOSSY RED ENGRAVED

Scale 1: 3.2

FIG. 1. Shillu, surface.

FIG. 8. Shillu, Pit 1, level 4.

FIG. 2. Cerro Narrío, Trench 6, level 7.

FIG. 9. Cerro Narrío, Trench 6, level 4.

FIG. 3. Cerro Narrío, Trench 1S, level 2.

FIGS. 10-11. Shillu, surface.

FIG. 4. Shillu, Pit 1, level 1.

FIG. 12. Cerro Narrío, Trench 1S, level 4.

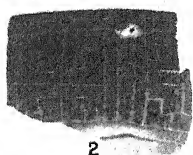
FIGS. 5-7. Shillu, surface.

FIG. 13. Shillu, Pit 1, level 3.

FIGS. 14-15. Cerro Narrío, surface.



1



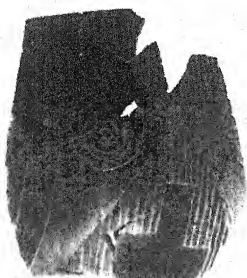
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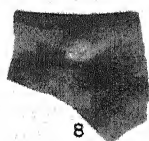
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14



15

PLATE 33. GLOSSY RED ENGRAVED AND GRAY ENGRAVED

Scale (Figs. 4-7) 1: 1.3

*Glossy Red Engraved*

FIG. 1. Shillu, Pit 1, level 1; height 14.5 cm.

FIG. 2. Shillu, Pit 1, levels 2-3; height 13.5 cm.

*Gray Engraved*

FIG. 3. Red-slipped body below engraved area; Shillu, surface; height 9.5 cm.

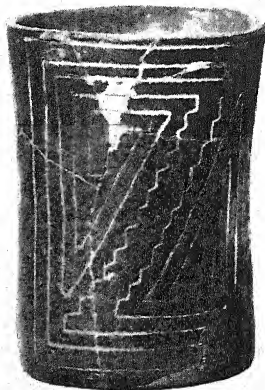
FIGS. 4-5. Cerro Narrío, surface.

FIG. 6. Cerro Narrío, Trench 1 (stratification test), level 3.

FIG. 7. Cerro Narrío, Trench 1N, level 3.



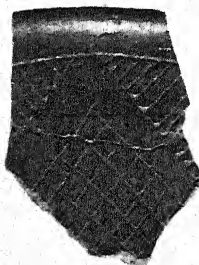
1



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PLATE 34. GLOSSY RED NEGATIVE, GLOSSY RED ENGRAVED  
AND RED BANDED INCISED

Scale 1: 2.7

FIGS. 1-2. Glossy Red Negative; Shillu, surface.

FIG. 3. Aberrant Glossy Red Engraved; Cerro Narrío, Trench 1N, level 4.

FIG. 4. Glossy Red Negative; Shillu, surface.

FIG. 5. Aberrant Glossy Red Engraved (fragment of same vessel as Figure 3);  
Cerro Narrío, Trench 1N, level 4.

FIG. 6. Aberrant Glossy Red Engraved (fragment of same vessel as Figures 3  
and 5); Cerro Narrío, Trench 1N, level 4.

*Red Banded Incised*

FIGS. 7-8. Cerro Narrío, surface.

FIG. 11. Cerro Narrío, Trench 6, level 4.

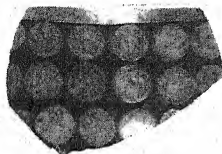
FIG. 9. Shillu, Pit 2, level 5.

FIG. 12. Shillu, surface.

FIG. 10. Shillu, surface.

FIG. 13. Cerro Narrío, Trench 1S, level 5.

FIG. 14. Shillu, surface.



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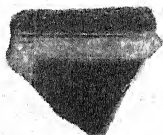
6



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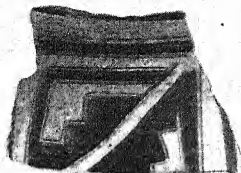
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14

PLATE 35. ELEN PATA

FIG. 1. La Capilla, near Cañar; length 16.5 cm.; Verneau and Rivet, 1922, plate 38.

FIG. 2. Cañar; diameter approximately 12 cm.; Konanz Collection.

FIG. 3. Inga-pirca; length approximately 18 cm.; Konanz Collection.

FIG. 4. Cerro Narrío; height 13 cm.; Arriaga Collection.

FIG. 5. Elen Pata, Chimborazo; Jijón, 1927, vol. 1, plate 98.

FIG. 6. Huavalac period, Chimborazo; Jijón, 1927, vol. 2, plate 115.

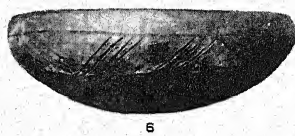
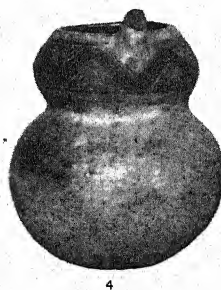
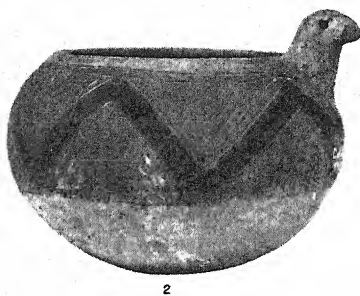


PLATE 36. CERRO NARRIO: ELEN PATA

Scale (Figs. 1, 4-11) 1:2.8

FIG. 1. Trench 6, level 2.

FIGS. 4-7. Trench 6, level 2.

FIG. 2. Trench 6, level 2; diameter  
10.5 cm.

FIGS. 8-9. Surface.

FIG. 3. Cup with drinking tube; Trench  
14, level 1; height 7 cm.

FIG. 10. Trench 6, level 3.

FIG. 11. Trench 6, level 5.

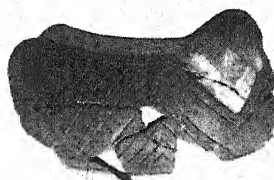
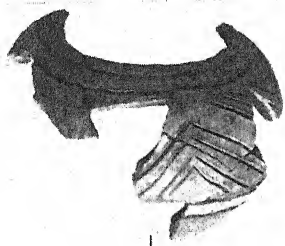


PLATE 37. SAN SEBASTIAN

Scale (Figs. 1-3, 5) 1: 2.9

FIG. 1. Cerro Narrío, Trench 4, level 2.

FIG. 2. Cerro Narrío, Trench 4M, level 5.

FIG. 3. Cerro Narrío, Trench 4M, level 3.

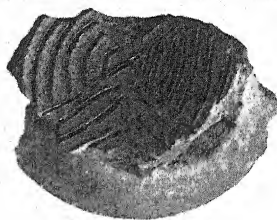
FIG. 4. San Sebastián, Chimborazo; Jijón, 1927, vol. 1, plate 44.

FIG. 5. Cerro Narrío, surface.

FIG. 6. San Sebastián, Chimborazo; Jijón, 1927, vol. 1, plate 43.



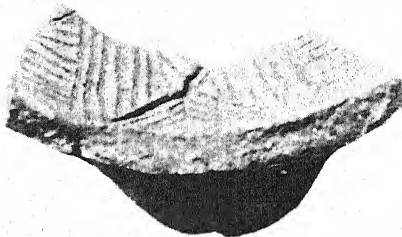
1



2



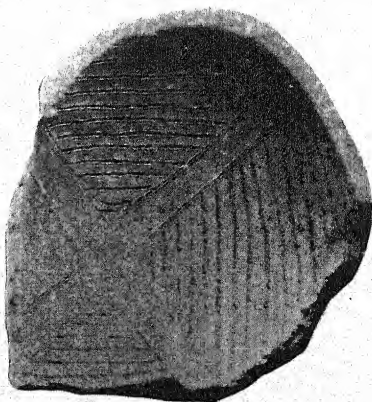
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6



PLATE 38. TUNCAHUAN

Scale (Figs. 1, 3-6) 1:2.3

*Variant A*

- FIG. 1. Cerro Narrío, Trench 6, level 4.
- FIG. 2. Cerro Narrío, Trench 6, level 3; diameter 15 cm.
- FIGS. 3-4. Cerro Narrío, Trench 6, level 3.
- FIG. 5. Cerro Narrío, Trench 6, level 4.
- FIG. 6. Cerro Narrío, Trench 3, level 3.
- FIG. 7. Joyaczhí; Jijón, 1930, plate 25.
- FIG. 8. Cerro Narrío; diameter 12.5 cm.; Arriaga Collection.
- FIG. 9. Cerro Narrío; diameter 14 cm.; Arriaga Collection.

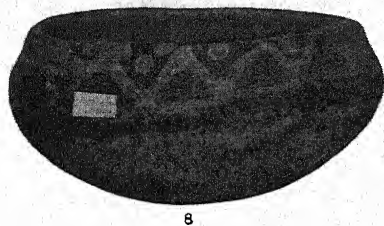
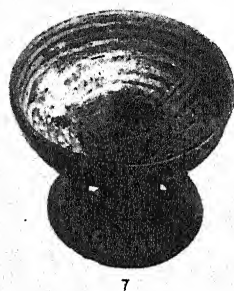
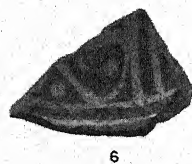
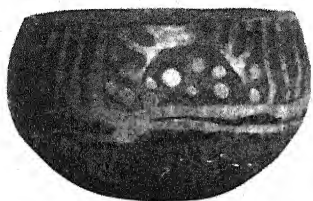


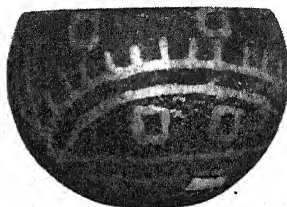
PLATE 39. TUNCAHUAN

*Variant B*

- FIG. 1. Cerro Narrío; diameter 12 cm.; Arriaga Collection.
- FIG. 2. Cerro Narrío; diameter 12 cm.; Arriaga Collection.
- FIG. 3. Cañar; diameter approximately 14 cm.; Konanz Collection.
- FIG. 4. Cerro Narrío; diameter 10 cm.; Arriaga Collection.
- FIG. 5. Cañar; diameter approximately 12 cm.; Konanz Collection.
- FIG. 6. Cañar; diameter approximately 11 cm.; Konanz Collection.



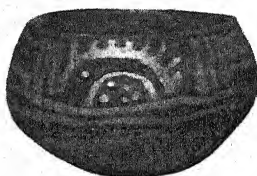
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6

PLATE 40. TUNCAHUAN

Scale (Figs. 1-5, 9-10) 1: 3.8

*Variant D*

*White-on-Red with Negative*

FIGS. 1-2. Cerro Narrío, Trench 6, level 2.

FIG. 3. Fragment of same vessel as Figure 2; Cerro Narrío, Trench 6, level 2.

FIG. 4. Cerro Narrío, Trench 6, level 2.

FIG. 5. Fragment of same vessel as Figures 2 and 3; Cerro Narrío, Trench 6, level 2.

*White-on-Red without Negative*

FIG. 6. Cerro Narrío; Jijón, 1930, plate 25.

FIG. 7. Cerro Narrío; diameter 12.5 cm.; Arriaga Collection.

FIG. 8. Cerro Narrío; diameter 13 cm.; Arriaga Collection.

FIG. 9. Cerro Narrío, Trench 6, level 3.

FIG. 10. Cerro Narrío, Trench 4, level 2.

FIG. 11. Cañar; diameter approximately 13 cm.; Konanz Collection.

FIG. 12. Cañar; diameter approximately 15 cm.; Konanz Collection.

FIG. 13. Cañar; diameter approximately 18 cm.; Konanz Collection.



PLATE 41. CERRO NARRIO: TUNCAHUAN

*Variant C*

- FIG. 1. Height 35 cm.; Arriaga Collection.  
FIG. 2. Trench 6, level 2; total length 19 cm.  
FIG. 3. Diameter 13 cm.; Arriaga Collection.  
FIG. 4. Aberrant; Trench 6, level 2; height 5.5 cm.

*Variant F*

- FIG. 5. Surface; maximum length 10 cm.  
FIG. 6. Trench 4M, level 3; maximum length 9 cm.  
FIG. 7. Trench 13, level 4; diameter 19 cm.

*Variant E*

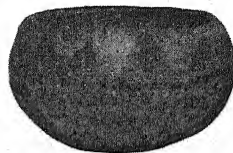
- FIG. 8. Surface; height 8.5 cm.



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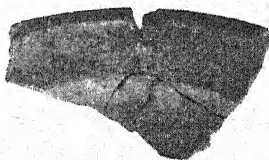
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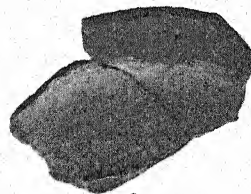
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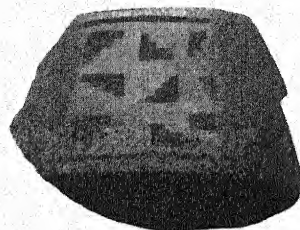
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PLATE 42. CERRO NARRIO: UNIQUE SHERDS OF POSSIBLE  
COASTAL AFFILIATION

Scale 1: 2

FIG. 1. Trench 6, level 1.

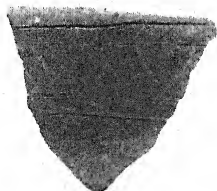
FIG. 2. Trench 12, level 3.

FIG. 3. Trench 14, level 6.

FIG. 4. Trench 1S, level 12.

FIG. 5. Trench 9, level 9.

FIGS. 6-11. Surface.



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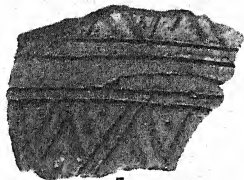
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PLATE 43. CERRO NARRIO: UNIQUE SHERDS OF POSSIBLE  
COASTAL AFFILIATION

Scale 1: 2.6

FIG. 1. Cord-marked; Trench 1N,  
level 11.

FIG. 2. Cord-marked; Trench 1 (strati-  
fication test), level 8.

FIG. 3. Surface.

FIG. 4. Trench 4S, level 3.

FIG. 5. Trench 4M, level 1.

FIG. 6. Surface.

FIG. 7. Black-on-red; Trench 15, level 4.

FIG. 8. Trench 4M, level 11.

FIG. 9. Trench 1M, level 10.

FIG. 10. Trench 6, level 2.

FIG. 11. Trench 15, level 11.

FIG. 12. Trench 4M, level 8.

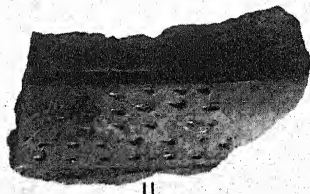
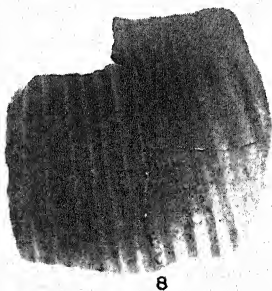
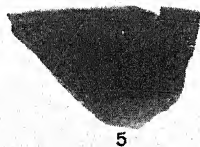
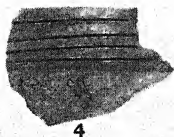


PLATE 44. CERRO NARRIO: UNIQUE SHERDS

Scale 1: 2.6

FIG. 1. Trench 1M, level 12.

FIGS. 4-9. Surface.

FIG. 2. Trench 6, level 4.

FIG. 10. Trench 15, level 8.

FIG. 3. Trench 9, level 11.

FIG. 11. Surface.

FIG. 12. White-on-red; Trench 4, level 2.

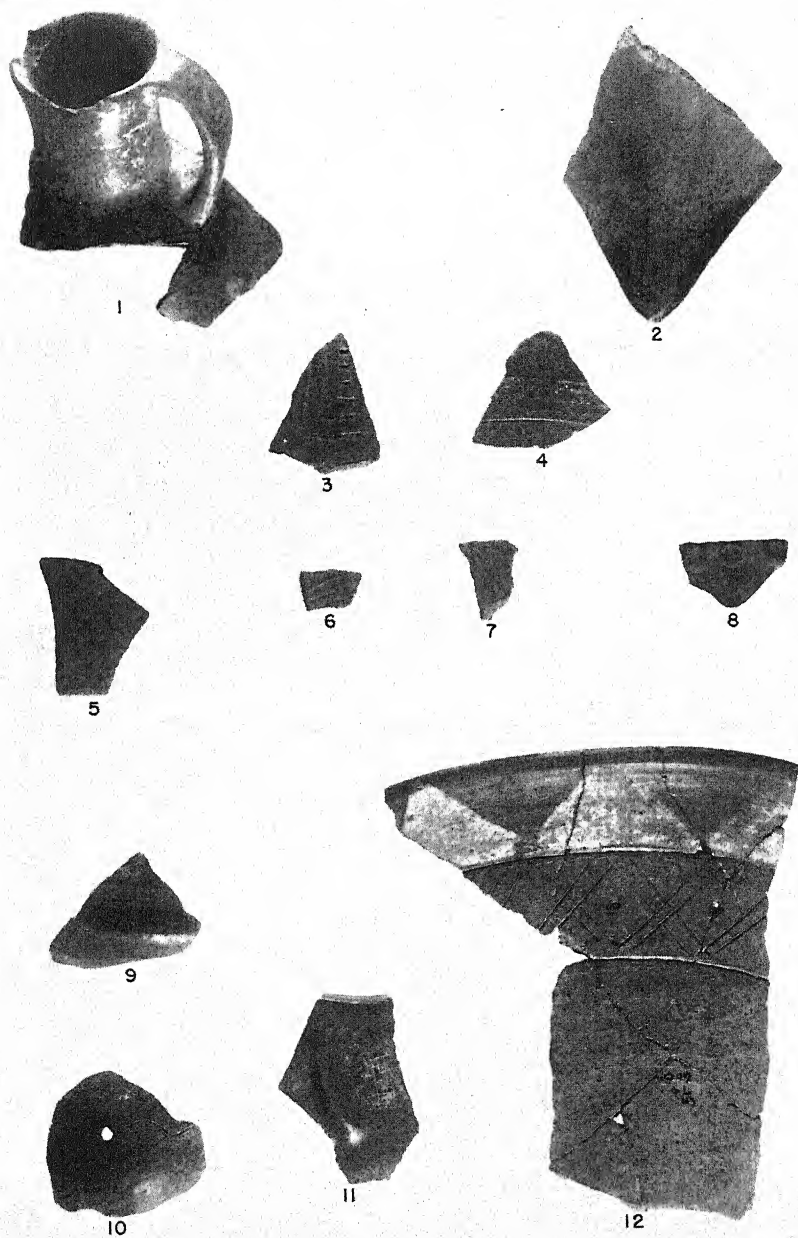


PLATE 45. INCA POTTERY

- FIG. 1. Cañar; height approximately 30 cm.; Konanz Collection.  
FIG. 2. Azuay; height approximately 30 cm.; Konanz Collection.  
FIG. 3. Cerro Narrío; diameter 9 cm.; Arriaga Collection.  
FIG. 4. Cerro Narrío; height 16.5 cm.; Arriaga Collection.  
FIG. 5. Cerro Narrío; height 12 cm.; Arriaga Collection.  
FIG. 6. Cerro Narrío; height 27 cm.; Arriaga Collection.  
FIG. 7. Cerro Narrío; height 10 cm.; Arriaga Collection.  
FIG. 8. Cerro Narrío; height 7 cm.; Arriaga Collection.  
FIG. 9. Cerro Narrío; height 11.5 cm.; Arriaga Collection.



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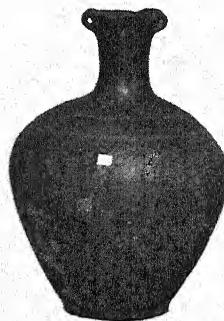
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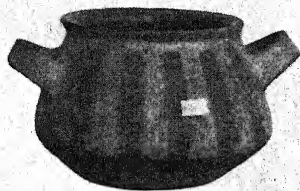
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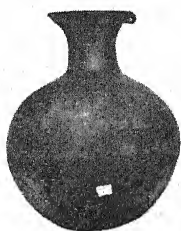
PLATE 46. INCA AND CHIMU POTTERY

*Inca*

- FIG. 1. Cerro Narrío; height 20 cm.; Arriaga Collection.  
FIG. 2. Cerro Narrío; height 8.5 cm.; Arriaga Collection.  
FIG. 3. Cerro Narrío; height 12.5 cm.; Arriaga Collection.

*Chimu*

- FIG. 4. Cañar; height 16 cm.; Verneau and Rivet, 1922, plate 47.  
FIG. 5. Cerro Narrío; height 12.5 cm.; Uhle, 1922c, fig. 75.  
FIG. 6. Cañar; height approximately 25 cm.; Konanz Collection.  
FIG. 7. Cañar; height approximately 22 cm.; Konanz Collection.



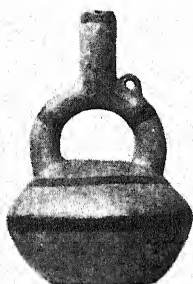
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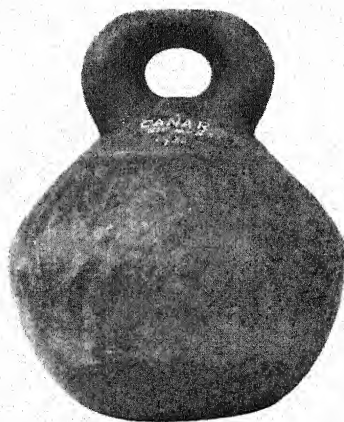
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PLATE 47. CERRO NARRIO: STONE ARTIFACTS

- FIG. 1. Celt; Trench 3, level 2; length 12.5 cm.  
FIG. 2. Chipped point; Trench 6, level 7; length 3.5 cm.  
FIG. 3. Pottery-smoother(?); Trench 11, level 9; length 5 cm.  
FIG. 4. Knife; Trench 1M, level 10; length 10 cm.  
FIG. 5. Spindle whorl; Trench 3, level 7; diameter 4.5 cm.

*Carved ornaments*

- FIG. 6. Trench 1M, level 6; length 4.5 cm.      FIGS. 7-9. Jijón Collection. Scale about 1:3.

- FIG. 10. Surface; length 3.4 cm.

*Beads*

- FIG. 11. Trench 4, level 6; diameter 0.8 cm.  
FIG. 12. Surface; length 1.4 cm.  
FIG. 13. Trench 4, level 13; length 2.4 cm.  
FIG. 14. Trench 15, level 14; length 2.7 cm.  
FIG. 15. Trench 11, level 4; length 1.4 cm.  
FIG. 16. Trench 4, level 2; length 1.2 cm.

*Figurines*

- FIG. 17. Trench 4, level 5; length 7.5 cm.  
FIG. 18. Trench 1N, level 7; length 4.4 cm.
- 

- FIG. 19. Atlatl spur; Cerro Narrío, Trench 3, level 3; length 2.4 cm.  
FIG. 20. Pendant; provenience unknown; length 4.5 cm.

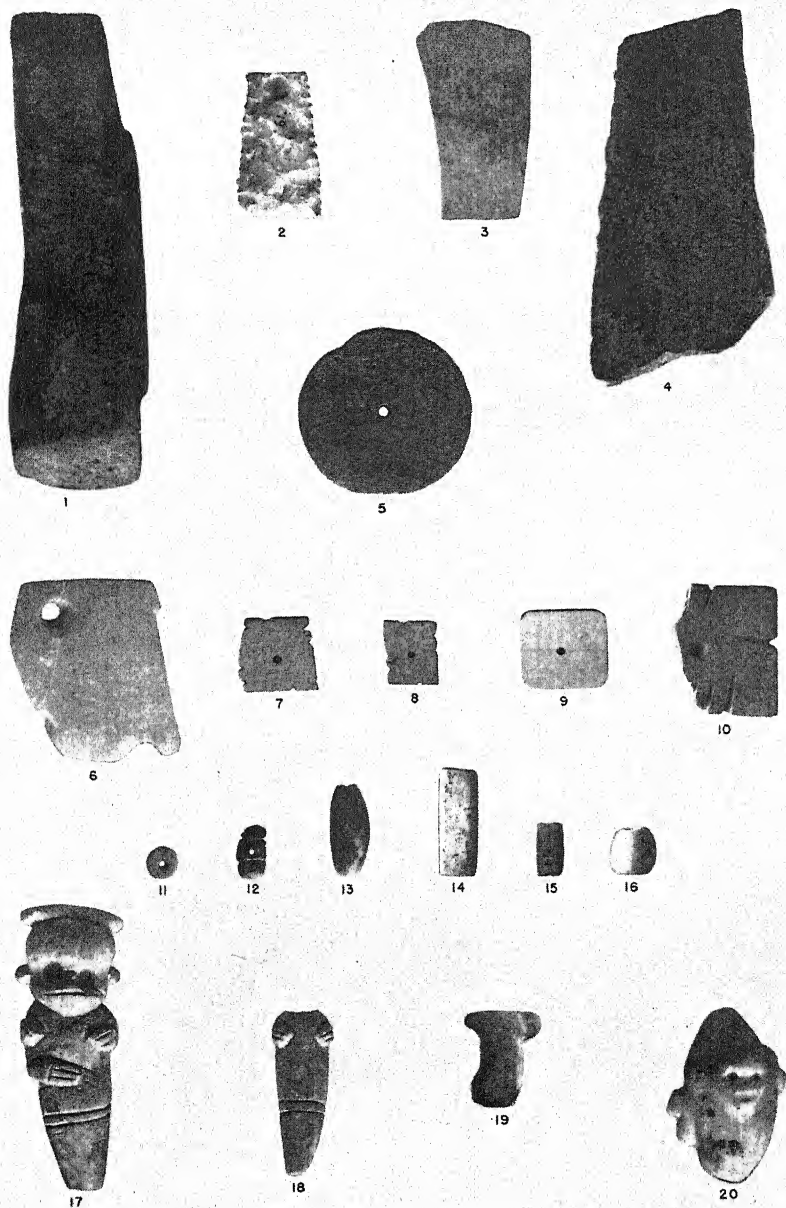


PLATE 48. CERRO NARRIO: BONE ARTIFACTS

Scale 1: 2.6

FIG. 1. Awls.

FIG. 2. Needles.

FIG. 3. Bodkins.

FIG. 4. Polished rod.

FIG. 5. Spatulas.

FIG. 6. Notched point.

FIG. 7. Ornament.

FIG. 8. Rings.

FIG. 9. Whistle or plug.

FIG. 10. Bird-bone whistle.

Fig. 11. Scraper.

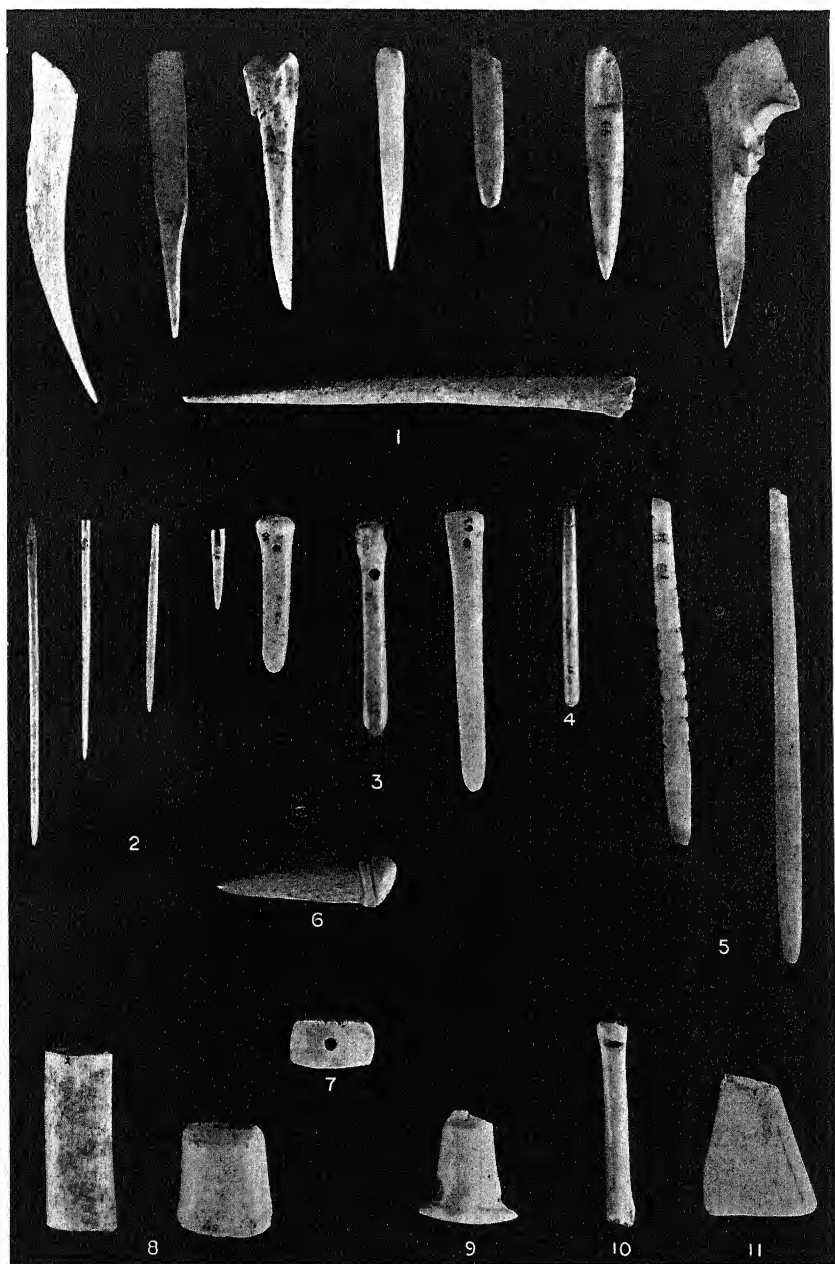


PLATE 49. SHELL ARTIFACTS

*Figurines*

FIG. 1. Chuquipata; length 6.5 cm.; Verneau and Rivet, 1912, plate 16.

FIG. 2. Chordeleg; length 8 cm.; Verneau and Rivet, 1912, plate 16.

FIG. 3. Pindilig; length 7 cm.; Verneau and Rivet, 1912, plate 16.

FIG. 4. Provenience unknown; length 6 cm.

FIG. 5. Cerro Narrío, Trench 11, level 1; length 3 cm.

---

FIG. 6. Ornament; Cerro Narrío, Trench 3, level 7; length 4 cm.

FIG. 7. Point; Cerro Narrío, surface; length 5.5 cm.

FIG. 8. Bead; Cerro Narrío, Trench 11, level 13; length 2.4 cm.

FIG. 9. Sting-ray spine; Cerro Narrío, surface; length 1.1 cm.

FIG. 10. Sting-ray spine; Cerro Narrío, Trench 4, level 2; length 1.2 cm.

FIG. 11. Bead; Cerro Narrío, Trench 4, level 6; length 3.1 cm.

FIG. 12. Ornament; Cerro Narrío, Trench 1N, level 13; length 5.1 cm.

FIG. 13. Bead; Cerro Narrío, Trench 7, level 1; length 2.6 cm.

FIG. 14. Engraved ornament; Cerro Narrío, surface; length 5 cm.



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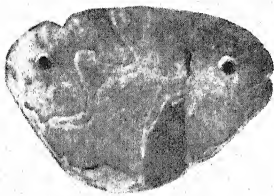
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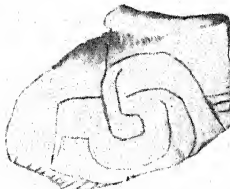
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PLATE 50. METAL ARTIFACTS

Various scales

*Gold ornaments*

- FIGS. 1-3. Cojitambo, Cañar; Konanz Collection.      FIG. 4. Cerro Narrío, Konanz Collection.

*Gilded copper ornaments*

- FIGS. 5-6. Cerro Narrío; Jijón Collection.

*Gold ornaments*

- FIGS. 7-10. Cerro Narrío; Jijón Collection.

*Gilded copper bell*

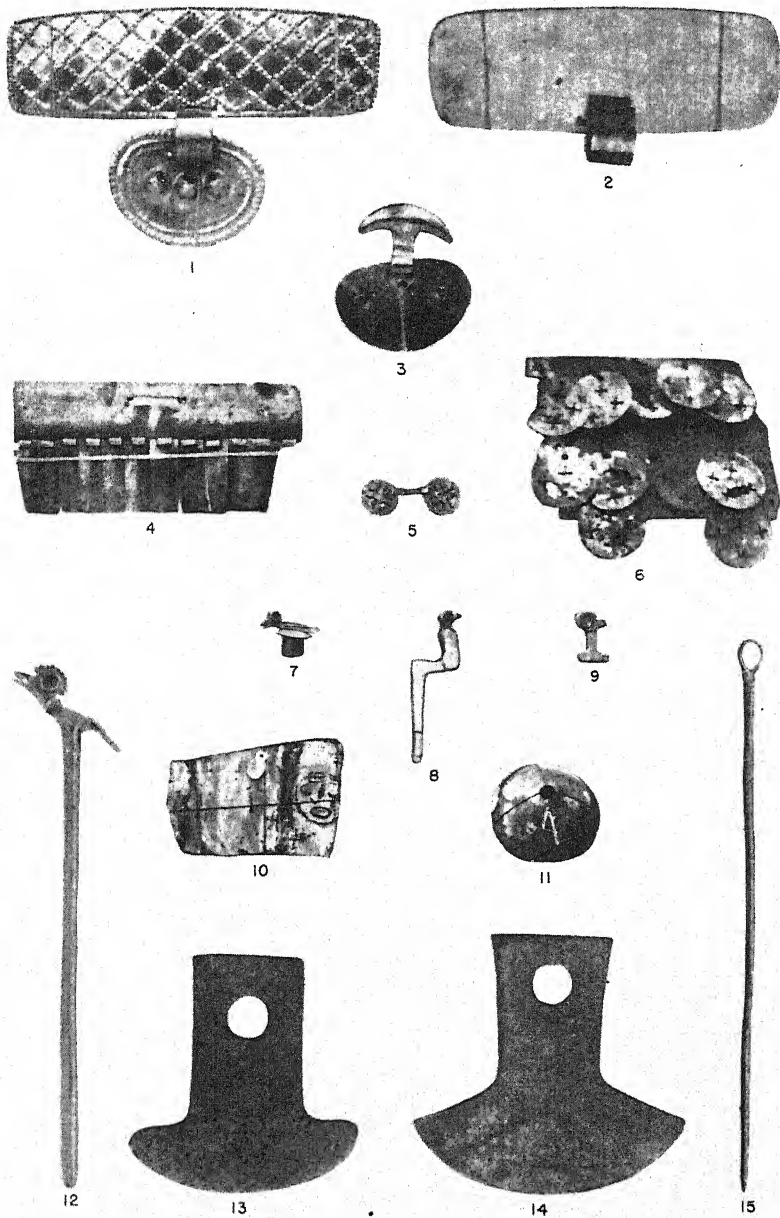
- FIG. 11. Cerro Narrío; Jijón Collection.

*Gold pin*

- FIG. 12. Cerro Narrío; Konanz Collection.

*Copper axes and pin*

- FIG. 13. Cerro Narrío, Trench 4, level 2; length 11 cm.      FIG. 14. Azuay; length 12 cm.  
FIG. 15. Cerro Narrío; Jijón Collection.



## PLATE 51. CLAY ARTIFACTS

### *Figurines*

- FIG. 1. Penipe; length 13 cm.; Verneau and Rivet, 1922, plate 46.  
FIG. 2. Cerro Narrío, Trench 6, level 3; length 13 cm.  
FIG. 3. Quinjeo; length 10 cm.; Verneau and Rivet, 1922, plate 44.

### *Spindle whorls*

- FIG. 4. Cerro Narrío, Trench 6, level 4; diameter 5 cm.  
FIG. 5. Cerro Narrío, Trench 16, level 8; diameter 2.5 cm.  
FIG. 6. Cerro Narrío, Trench 3, level 3; diameter 1.7 cm.

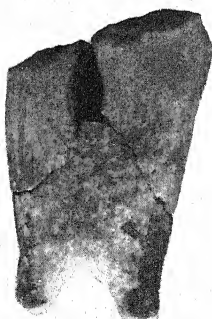
### *Pottery-smoothers or polishers*

- FIG. 7. Cerro Narrío, Trench 12, level 7; length 7 cm.  
FIG. 8. Cerro Narrío, Trench 11, level 9; length 7.5 cm.  
FIG. 9. Cerro Narrío, Trench 11, level 6; length 5 cm.  
FIG. 10. Cerro Narrío, Trench 16, level 4; length 5.5 cm.

- 
- FIG. 11. Palette(?); Cerro Narrío, Trench 1M, level 9; length 9 cm.  
FIG. 12. Model of an eared ax(?); Cerro Narrío, Trench 11, level 10; length 4.5 cm.  
FIG. 13. Pottery-smoother; Cerro Narrío, Trench 15, level 12; length 6 cm.



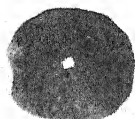
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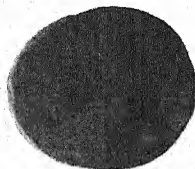
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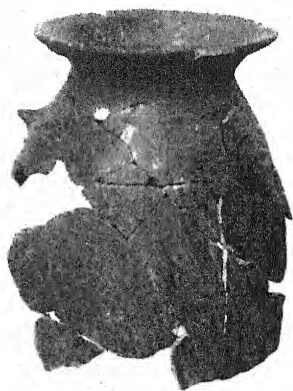
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PLATE 52. VESSELS AND SHERDS OF CASHALOMA TYPE

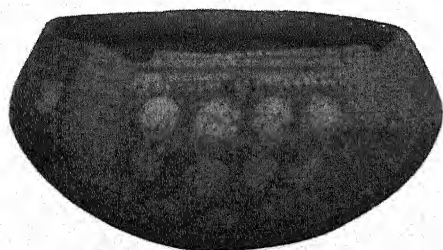
- FIG. 1. Red-on-Buff; Cashaloma, Pit 4, level 8; height 35 cm.
- FIG. 2. Red-on-Buff; Cashaloma, Pit 4, level 8; height 28 cm.
- FIG. 3. Inca-influenced vessel; Cerro Narrío; diameter 18 cm.; Arriaga Collection.
- FIG. 4. Red-on-Buff; Cashaloma, Pit 4, level 7; height 32 cm.
- FIG. 5. Inca-influenced vessel; Cerro Narrío; diameter 20 cm.; Arriaga Collection.
- FIG. 6. Inca-influenced vessel; Cañar; height approximately 32 cm.; Konanz Collection.



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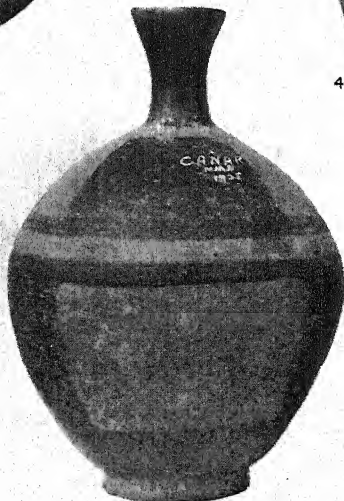
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PLATE 53. SHERDS OF CASHALOMA TYPE, SHOWING  
INCA INFLUENCE

Scale 1: 3

- |   |                                     |
|---|-------------------------------------|
| FIGS. 1-3. Cashaloma, surface.            | FIG. 13. Cashaloma, Pit 3, level 1. |
| FIG. 4. Cashaloma, Pit 1, level 1.        | FIG. 14. Cashaloma, Pit 3, level 2. |
| FIGS. 5-6. Cashaloma, surface.            | FIGS. 15-16. Cashaloma, surface.    |
| FIG. 7. Cashaloma, Pit 3, level 2.        | FIG. 17. Cashaloma, Pit 1, level 2. |
| FIG. 8. Cashaloma, Pit 3, level 3.        | FIG. 18. Cashaloma, surface.        |
| FIGS. 9-10. Cashaloma, surface.           | FIG. 19. Cashaloma, Pit 2, level 4. |
| FIG. 11. Cerro Narrío, Trench 6, level 1. | FIG. 20. Cashaloma, Pit 3, level 2. |
| FIG. 12. Cashaloma, surface.              | FIG. 21. Cashaloma, surface.        |

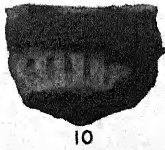
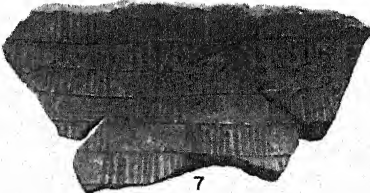
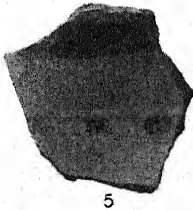
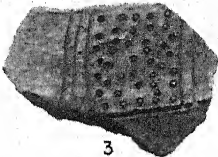
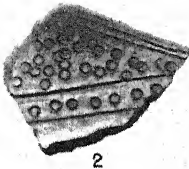




PLATE 54. VESSELS AND SHERDS OF CASHALOMA TYPE,  
SHOWING INCA INFLUENCE

FIG. 1. Cañar; height approximately 45 cm.; Konanz Collection.

FIG. 2. Cañar; height 15 cm.; Arriaga Collection.

FIG. 3. Cashaloma, surface; length 10 cm.

FIG. 4. Cashaloma, Pit 4, level 3; length 10.5 cm.

FIG. 5. Cañar; height 22.5 cm.; Arriaga Collection.

FIG. 6. Cañar; height approximately 20 cm.; Konanz Collection.

FIG. 7. Cañar; height approximately 34 cm.; Konanz Collection.



1



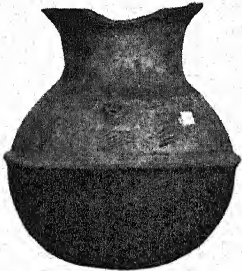
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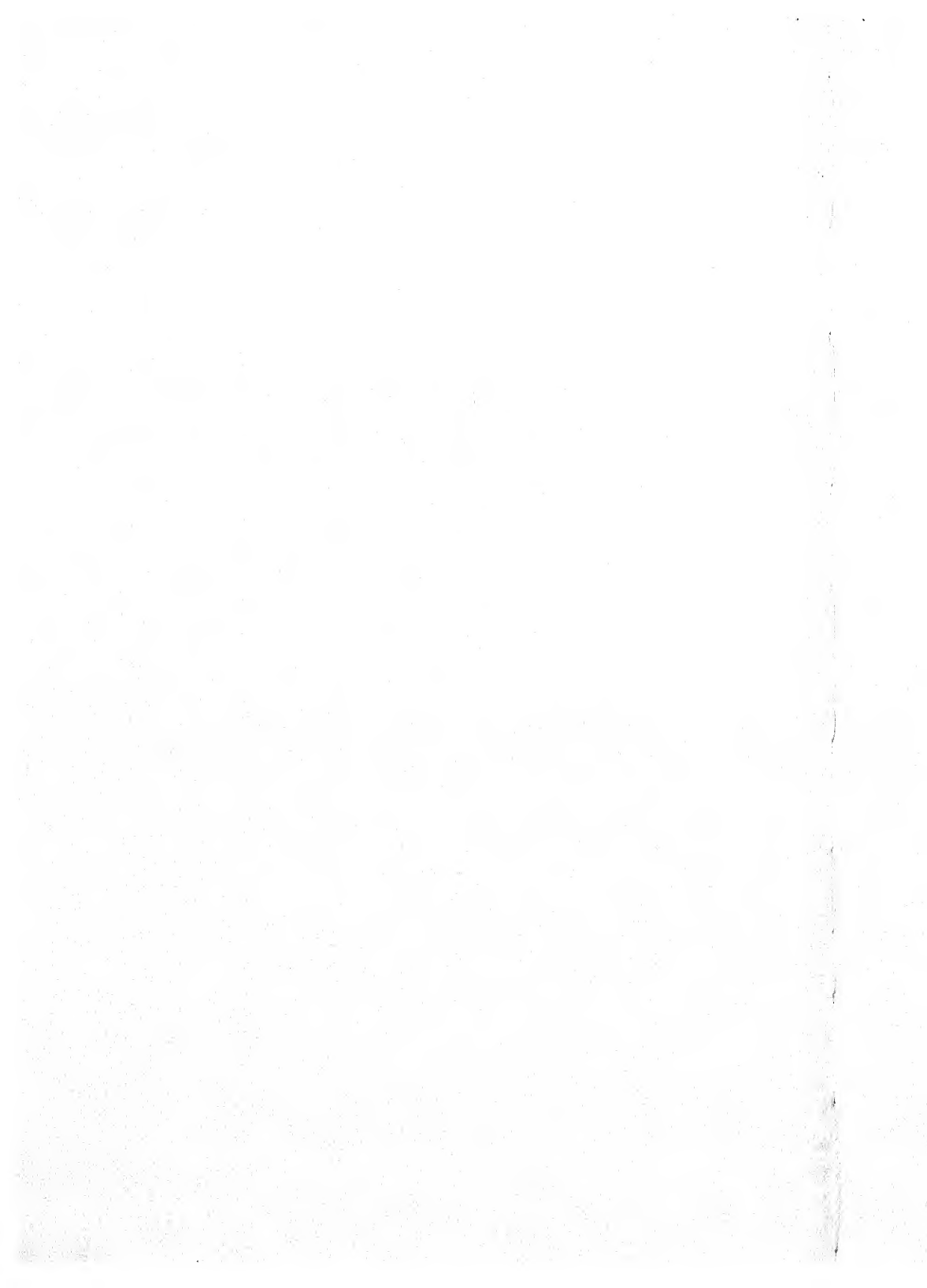


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NORTHWESTERN MEXICO

- 2a. KELLY, ISABEL. Excavations in western Jalisco. University of California, Ibero-Americana, No. 25.

CENTRAL COAST OF PERU

- 3a. STRONG, WILLIAM DUNCAN, and WILLEY, GORDON R. Archaeological notes on the central coast of Peru, in *Archaeological Studies in Peru, 1941-42*. Papers in Archaeology and Ethnology of the Department of Anthropology, Columbia University, vol. 1, pt. 1.
- 3b. STRONG, WILLIAM DUNCAN, and CORBETT, JOHN M. A ceramic sequence at Pachacamac, Peru, in *Archaeological Studies in Peru, 1941-42*. Papers in Archaeology and Ethnology of the Department of Anthropology, Columbia University, vol. 1, pt. 2.
- 3c. WILLEY, GORDON R. Excavations in the Chancay Valley, Peru, in *Archaeological Studies in Peru, 1941-42*. Papers in Archaeology and Ethnology of the Department of Anthropology, Columbia University, vol. 1, pt. 3.
- 3d. WILLEY, GORDON R. A supplement to the pottery sequence at Ancon, Peru, in *Archaeological Studies in Peru, 1941-42*. Papers in Archaeology and Ethnology of the Department of Anthropology, Columbia University, vol. 1, pt. 4.

CHILE

- 4a. BIRD, JUNIUS. Excavations in northern Chile. Anthropological Papers of the American Museum of Natural History, vol. 38, pt. 4.

VENEZUELA AND THE WEST INDIES

- 5a. HOWARD, GEORGE D. Excavations at Ronquín, Venezuela. Yale University Publications in Anthropology, No. 28.
- 5b. OSGOOD, CORNELIUS. Excavations at Tocorón, Venezuela. Yale University Publications in Anthropology, No. 29.

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- 5e. ROUSE, IRVING. Archaeology of the Maniabón Hills, Cuba. Yale University Publications in Anthropology, No. 26.

## COLOMBIA

- 6a. BENNETT, WENDELL C. Archaeological regions of Colombia: a ceramic survey. Yale University Publications in Anthropology.
- 6b. FORD, JAMES A. Excavations in the vicinity of Cali, Colombia. Yale University Publications in Anthropology.

## SOUTHERN HIGHLANDS OF PERU

- 7a. KIDDER, ALFRED, II. Some early sites in the northern Lake Titicaca basin. Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University, vol. 27, No. 1.
- 7b. ROWE, JOHN HOWLAND. An introduction to the archaeology of Cuzco. Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University, vol. 27, No. 2.
- 7c. TSCHOPIK, MARION HUTCHINSON. Some notes on the archaeology of the Department of Puno, Peru. Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University, vol. 27, No. 3.

## SOUTHERN COAST OF PERU

- 8a. NEWMAN, MARSHALL T. Some Indian skeletal material from the coast of Peru. Papers of the Peabody Museum of American Archaeology and Ethnology, Harvard University, vol. 28, No. 1.
- 8b. TELLO, JULIO C. Paracas. University of San Marcos, Lima.

## NORTHERN PERU AND ECUADOR

- 9a. McCOWN, THEODORE D. Survey of northern Peru: Huamachuco. University of California Publications in American Archaeology and Ethnology, vol. 42, No. 1.
- 9b. COLLIER, DONALD, and MURRA, JOHN V. Survey and excavations in southern Ecuador. Field Museum of Natural History, Anthropological Series, vol. 35.

## CENTRAL AMERICA

- 10a. LONGYEAR, JOHN. Excavations in Salvador. Memoirs of the Peabody Museum of Archaeology and Ethnology, Harvard University, vol. 9, No. 2.